D&S Vol. 3

MODELS A & B

F-16 Fighting Falcon

in detail & scale

Bert Kinzey

DETAIL & SCALE SERIES

The “Detail & Scale” series of publications is unique in aviation literature. Unlike other publications on military aircraft, this series does not emphasize the history or markings carried by the aircraft featured. Instead, attention is focused on the many physical details of the aircraft such as cockpit interiors, radar and avionics installations, armament, landing gear, wheel wells, and ejection seats. These details are covered more thoroughly than in any other series, and are presented in the form of close-up photography and line drawings. Special consideration is given to the detail differences between the variants and sub-variants of the aircraft.

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Although a brief historical summary is always presented, it Is not intended to be all inclusive. It will, however, provide the most important dates and events in the development and operational life of each aircraft.

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The “Detail & Scale" series is detailed, technical, and accurate, providing the most comprehensive coverage of this nature that is available anywhere in aviation publications.

ABOUT THE AUTHOR

Bert Kinzey, author, and president of Detail & Scale, Inc. was born in Richmond, Virginia in 1945. The following year his family moved to Blacksburg, Virginia where his father became a professor of architecture at Virginia Tech (VPI). Until he was about six years old, Bert was often frightened by the loud piston-driven military fighters that sometimes flew low over his home while he was outside playing. On more than one occasion he came running into the house extremely frightened by an aircraft that had just flown over.

His father took him to the VPI airport, where cadets were learning to fly on J-3 Piper Cubs, and arranged for him to go for a flight. Bert sat on his father's lap for a short trip around Blacksburg, and that forever ended his fear of airplanes. Later, Bert's father built a balsa and tissue model of the J-3 Cub, and Bert's interest in modeling began.

Bert’s fear of aircraft soon gave way to a love of aviation, and he began scale modeling. Bert looked at modeling (and still does) not as a hobby in and of itself, but a small facet of his overall interest in aviation.

The author in the rear seat of an F-5F after returning from a Red Flag mission.

In 1959 his family moved to Gainesville, Florida where his aviation interest took second place to his trumpet playing in high school. In 1964, he graduated from P.K. Yonge High School, and returned to Virginia Tech specifically to fulfill his lifetime dream to be in the Virginia Tech Regimental Band - The "Highty Tighties.”

Upon graduation he was commissioned a second lieutenant in the Army, and he spent almost eight years as an army officer. During this time he commanded a Hawk guided missile battery in Korea, and later wrote and taught classes in airpower, the Soviet air threat, and air defense suppression at the Army's Air Defense School at Ft. Bliss, Texas.

In August 1976, he resigned from active duty in the Army, but his reputation as being knowledgeable in all aspects of military airpower led to a job offer as a civilian with the Department of the Army. He served in this position for four years as a “subject matter expert” in military airpower, and was responsible for the development of the Army’s new program on aircraft identification, the first in the world to feature dynamic simulation. During this time he started Detail & Scale as a part-time business to provide detailed reference material on military aircraft.

Detail & Scale became so successful that Bert resigned from his position with the Army to devote full time to his new company. Since then he has written several books as well as articles for several magazines. He is also an avid modeler and member of the International Plastic Modelers Society (IPMS). He has one of the largest collections of aviation photographs in the world, and is recognized as an authority on military aircraft.

As a youngster who feared airplanes, it is ironic that Bert should now be so involved with aviation. He is a licensed pilot, and lives with his wife, Lynda, and their two children, Jan and Chip, in El Paso, Texas.

D&S Vol. 3
MODELS A & B

F-16

Fighting Falcon

in detail & scale

Bert Kinzey

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Front Cover: Three F-16s. each with a different engine, fly in close formation. The top aircraft is in production camouflage, and has the standard F100-PW-200 engine. the middle aircraft carries the colorful red. white, and blue scheme and markings indicating that it is the test bed for the General Electric F101 DFE engine. The closest aircraft is the F-16B used to test the J-79 engine, and has a unique blue and gray paint scheme.

(General Dynamics)

Rear Cover: Top: Cockpit in an F-16A (General Dynamics).

Bottom: Westinghouse radar installation (General Dynamics).

INTRODUCTION

Front view of an F-16A. Note the "twist" in the wings. ***(Nesset)***

ACM - The letters stand for, 'Air Combat Maneuvering," which is modern terminology for what used to be called dogfighting. Biplanes havegiven way to supersonic jets, and crude machine guns have been replaced by rapid-fire cannon and sophisticated missiles, but the basics are still the same - out maneuver and out shoot the other guy so as to shoot him down before he shoots you down.

The ACM arena is a realistic training environment that pits pilot against pilot and aircraft against aircraft. and performance here is a critical yardstick in determining the effectiveness of man and machine alike Dissimilar ACM, where different types of fighters engage one anotherisemphasized. and both the Air Force and the Navy have formed "aggressor" squadrons that fly the F-5 aircraft which closely approximates the size and performance of several Soviet fighters. The "aggressor" pilots assigned to these squadrons fly and fight against every type of American and free-world fighter, and are probably the best qualified to make a judgement about the capabilities of these fighters in air-to-air combat

Detail & Scale asked pilots from both the Air Force and Navy "aggressor" squadrons which aircraft was the hardest to defeat one-on-one in a visual auto air confrontation. From both the Air Force and Navy pilots came the same answer without hesitation - the F-16. All of the pilots we talked to who had fought" the Fighting Falcon in ACM had praise for its speed. maneuverability, energy, and general dogfighting capabilities. This is quite a tribute tothis new fighter now entering service with the U.S. Air Forceand the air forces of several other nations.

But the F-16 is also designed to attack ground targets. The Air Force calls the F-16 a "swing" fighter, swinging from the air-to-air role to ground attack missions to "swing" the tide of battle where necessary. Israel dramatically demonstrated the effectiveness of the F-16 in attacking ground targets when they used eight F-16s to attack Iraq's nuclear power plant on June 7. 1981 This was the first use of the F-16 in actual combat. Exercises conducted by the U.S. Air Force have also demonstrated the F-16's ability to attack ground targets, and pages 14 and 15 give some of the details of these exercises.

Already there are advanced and experimental versions of the F-16 in the planning stages. The Air Force will soon be ordering the F-16C and F-16D with even better computers, avionics, radar, and weapons delivery systems. An F-16 with forward swept wings has been proposed, and an F-16XL SCAMP (Supersonic Cruise Aircraft Modification Program) has been designed. These developments seem to assure a long service life for the F-16. and are possible subjects for a future publication by Detail & Scale. On the pages that follow is what we believe to be the most detailed look at the F-16A and F-16B provided in any single publication

DEVELOPMENTAL HISTORY

Brand new F-16A in flight. Note the new enlarged horizontal tail surfaces and the small light on the leading edge of the vertical tail. ***(General Dynamics)***

Lightweight fighter, air combat fighter, multinational fighter, swing fighter, multi-role fighter - these and other names have been applied to the F-16. and all areaccuratedescriptionsof theaircraft now officially named the "Fighting Falcon."

With the cost of military aircraft escalating to the point where the price of a single fighter today would buy an entire wing of World War II fighters, thequestion of number versus sophistication and capabilities arises. More simply stated, given a budgeted amount of dollars to spend on a fighter, one must decide on how much sophistication, which increases the price of each unit, he will buy, as a trade-off against the number of aircraft that can be purchased. All those "black boxes", avionics, and other devices add to the unit cost of the aircraft, and there are those who contend that the best solution is to purchase a few of these highly capable fighters. But the other side of the argument is to buy a much larger number of less sophisticated fighters, and many would argue that this would result in the most effective air force. Each side has valid arguments to support its contention. A highly capable fighter has a much better chance of winning a given fight in the air, or being effective in delivering ordnance against ground targets. The simpler, less expensive aircraft are generally easier to maintain, and can therefore be kept in the air performing their mission a greater percent of the time as compared to time spent on the ground for servicing and maintenance. Within the U.S. Air Force and Navy, the F-15 and F-14 are examples of the highly sophisticated aircraft, while the F-5 is an example of the less capable, less expensive aircraft. The price for one F-15 will buy about nine F-5Es. What all this has been called is "high" versus "low", for high cost versus low cost, and the solution that the Air Force has decided on has been called the "high-low mix." With valid arguments for both high and low, the Air Force decided to buy a mix of the two. Thehighlycapable, high cost F-15 is the high end of the mix, and the lightweight fighter competition was to determine the low end. The winner of the competition would be less capable, less costly, and be purchased in much larger numbers than the high end.

General Dynamics' YF-16 competed against Northrop's YF-17 in the lightweight fighter competition. and ultimately the YF-16 was declared the winner. According to Air Force officials, the competition was a close one. and the decision was a difficult one to make. Both aircraft proved to be very capable, and satisfactorily met all requirements. The Air Force stated that both aircraft would make excellent fighters, and indeed the YF-17 was used extensively in the development of the Navy's F-18 Hornet.

At the time the Air Force was looking at a new lightweight fighter, several NATO nations were beginning the search fora replacement for their aging F-104s. Again, with defense costs escalating, it seemed to be more economical to have all nations purchase the same aircraft, thus lowering research and development costs. Several aircraft were proposed. but again the F-16 won. and thus began a unique "co-op" production arrangement where the F-16 would be produced and used in several NATO air forces at the same time. Although no component

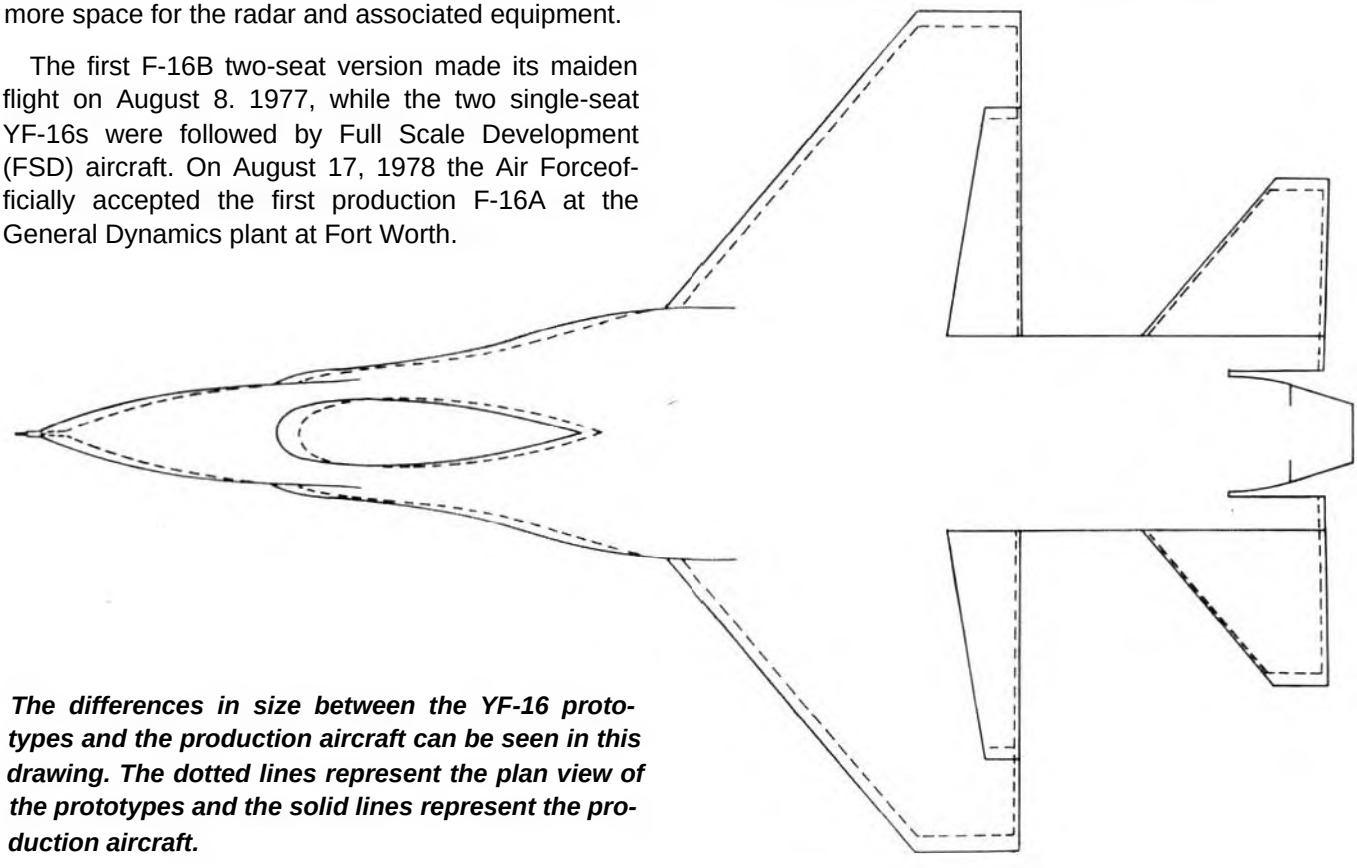
is completely produced in Europe, much production is accomplished there, and this benefits all of the user nations from economic and commonality of equipment standpoints.

The first two prototypes of the F-16 were adorned in many paint schemes ranging from the popular red, white, and blue scheme (inspired by America's bicentennial year in 1976), to a dull ghost gray. These YF-16s were probably photographed more extensively than any other prototypes in aviation history, and they were put through extensive flight testing. From this testing several design changes were incorporated, and the outline of the aircraft changed as shown in the drawing below. The dotted lines show the outline of the YF-16. while the solid lines show the outline of the F-16A production aircraft. The production aircraft was somewhat larger providing additional volume for equipment and growth and an additional 558 pounds of internal fuel. The horizontal stabilizers were increased in size by 15.8%, and the speed brakes were 9.6% larger. The wheelbase was eleven inches longer, the gun was moved twenty-four inches aft of the cockpit, and a tail hook was added. YF-16s had a split nose landing gear door, with half mounted on each side of the well, whileon production F-16s the entire door is one piece and located on the right side of the well. The nose and radome area is larger giving more space for the radar and associated equipment.

The first F-16B two-seat version made its maiden flight on August 8. 1977, while the two single-seat YF-16s were followed by Full Scale Development (FSD) aircraft. On August 17, 1978 the Air Forceofficially accepted the first production F-16A at the General Dynamics plant at Fort Worth.

Although the F-16 is the "low" end of the high-low mix mentioned earlier, it is by no means inexpensive. and it is certainly not lacking in capabilities. Pilots seem to like the aircraft, and already there is a major program in the works to improve the F-16s capabilities in the future. This three-stage program is known as the "Multinational Staged Improvement Program" (MSIP). and the first of the three stages began on aircraft number330on the production line at Fort Worth. Most of the first changes are internal and structural, but the addition ot the drag chute housing, as carried on Norwegian F-16s from the beginning, will be visible externally. At the same time these changes are being made, a new enlarged horizontal tail is being installed. The new tail is made of graphite epoxy and corrugated aluminum, and contains none of the high-cost titanium which is getting more scarce. Reports are that the Soviet Union is hoarding titanium and is thus inflating the costs. The tail is about 30% larger than the previous one. and it is estimated to save 20% in costs over the original design.

As MSIP continues, the F-16 will receive a new Westinghouse radar, a new head-up display, new avionics, and an environmental control system of expanded capacity. The computer capability will be expanded both in memory and processing speed, and newcockpitdisplays will be added. Aircraft with



The differences in size between the YF-16 prototypes and the production aircraft can be seen in this drawing. The dotted lines represent the plan view of the prototypes and the solid lines represent the production aircraft.

the expanded avionic package will reportedly be designated F-16C and F-16D for single and two-seat models respectively.

In production the F-16A & B now involves fifty-five major U.S. sub-contractors, and approximately 4000 other firms are involved to a lesser degree. Currently the production rate is about ten aircraft a month at the Fort Worth plant, but this could be increased to twenty-five a month, and even to forty-five a month if additional tooling became available.

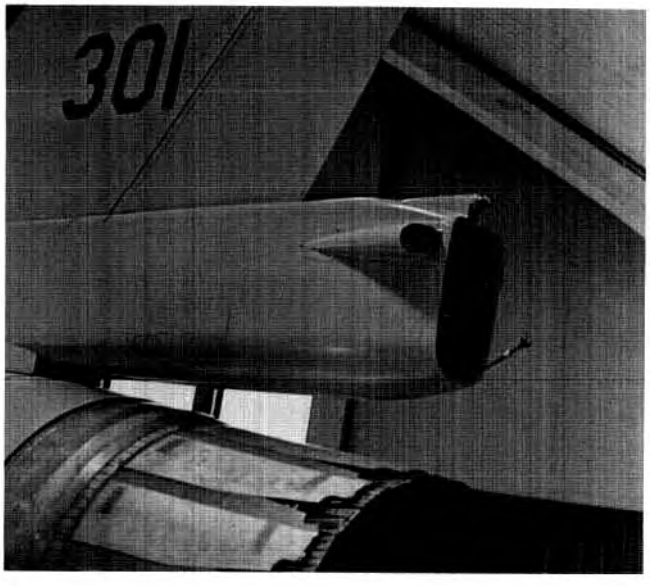
But the production is not limited to the United States. The five-nation agreement including Belgium, Denmark, The Netherlands, Norway, and the United States was signed in 1975. and is the largest international military co-production program in history. European-built F-16s are assembled by Fokker Aircraft in Schiphol (near Amsterdam). The Netherlands, and by SONACA/SABCA in Gosselies, Belgium. Major subcontractors for these European-built F-16s include 63 U.S. and 29 European manufacturers. Second tier subcontracting includes over 400 European companies in the F-16 program.

By the end of 1981 over 400 F-16s had been delivered from the American and European production lines, and orders are already nearing the 2000 mark. With more customers showing interest in the Fighting Falcon, the F-16 might well be produced in larger numbers than any previous jet fighter in the free world except for possibly the F-4 Phantom. On the pages that follow is a detailed look at the Fighting Falcon, an aircraft that will probably become the most often seen and recognized military aircraft in the skies during the 1980s - and beyond.

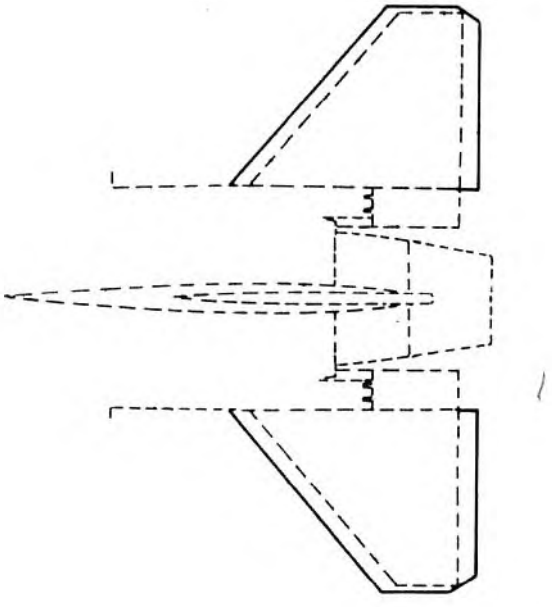
Two radical design changes have been proposed that are based on the F-16 airframe. One featured a swept-forward wing, and was studied by the Defense Advanced Research Projects Agency in conjunction with the USAF and NASA. However, due to budget constraints imposed by the Carter Administration, the F-16 SFW program has been dropped.

The second program is a company-funded venture by General Dynamics designed to provide long-term life for the F-16 program. This project, known as SCAMP, for Supersonic Cruise Aircraft Modification Program, incorporates very advanced aerodynamics determined by computer analysis. This new design will allow a maximum cruise speed in excess of Mach 2. and could double the ordnance-carrying capacity of the aircraft. Additionally it will give the F-16 a much shorter takeoff and landing capability.

It is too soon to state whether the SCAMP design will ever enter the production stage, but the Air Force has assigned the F-16E designation to the program. However it does seem certain that future versions of the F-16 will follow the -A and -B models now on the production lines.



The parabrake housing, originally only on Norwegian F-16s, is scheduled to be added to U.S. Air Force F-16s beginning with the F-16A-GD-15 production block. (Arhelm via Enerdal)

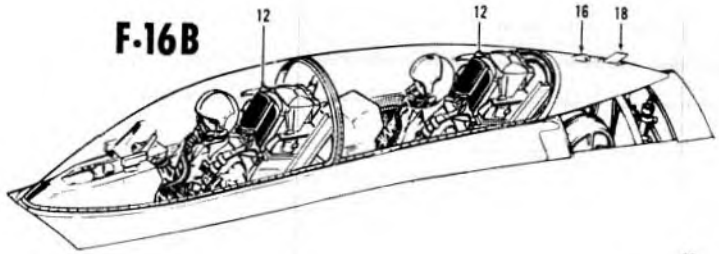


The new horizontal tail, shown in solid lines, is compared to the original tail in this 1/72nd scale drawing.

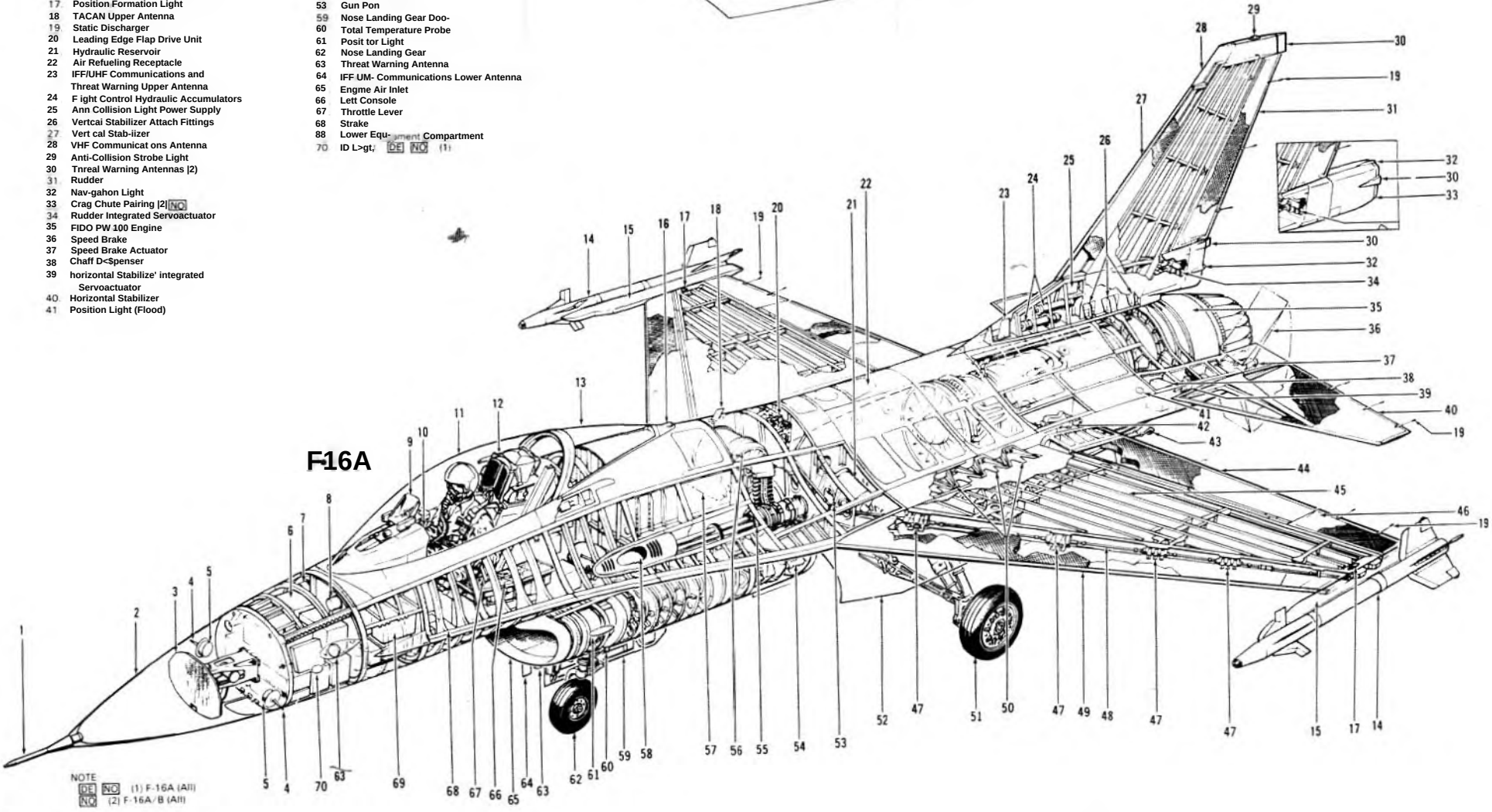
General Arrangement

1. Air Data Probe
2. N>se Radome
3. Radar Antenna
4. Angle of-Attack Probe
5. A-»gle of-An ack Transmitter
6. Forward Electronics Equipment Bay
7. Cabin Pressure Regulator
8. Cabin Pressure Safety Valve
9. Head-Up Display (HUD)
10. instrument Panel
11. Movable Canopy
12. Ejection Seat
13. Fised Canopy
14. AIM 9 Missile
15. Missile Launcher
16. Refuel and Upper Formation Light
17. Position Formation Light
18. TACAN Upper Antenna
19. Static Discharger
20. Leading Edge Flap Drive Unit
21. Hydraulic Reservoir
22. Air Refueling Receptacle
23. IFF/UHF Communications and Threat Warning Upper Antenna
24. F ight Control Hydraulic Accumulators
25. Ann Collision Light Power Supply
26. Vertcai Stabilizer Attach Fittings
27. Vert cal Stab-iizer
28. VHF Communicat ons Antenna
29. Anti-Collision Strobe Light
30. Tnreal Warning Antennas |2)
31. Rudder
32. Nav-gahon Light
33. Crag Chute Pairing |2| NO
34. Rudder Integrated Servoactuator
35. FIDO PW 100 Engine
36. Speed Brake
37. Speed Brake Actuator
38. Chaff D<$penser
39. horizontal Stabilize' integrated Servoactuator
40. Horizontal Stabilizer
41. Position Light (Flood)
42. F leper or Integrated Servoactuator
43. Arresting Hook
44. Flaperon
45. Wing Structural Boi
46. F<ied Trailing Edge Panel
47. Leading Edge Flap Rotary Actuator
48. Lead-ng Edge Flap Torque Shalt
49. Leading Edge Flap
50. Wmg Attach Fittings
51. Mam Landing Gear
52. Mam Landing Goar Doo-
53. Leading Edge Flap Drive Anglo Gear Boi
54. Air Conditioning Package
55. M61A1 20MMGun
56. Ammunition Drum
57. EPU Nitrogen Bottle
53. Gun Pon
59. Nose Landing Gear Doo-
60. Total Temperature Probe
61. Posit tor Light
62. Nose Landing Gear
63. Threat Warning Antenna
64. IFF UM- Communications Lower Antenna
65. Engme Air Inlet
66. Lett Console
67. Throttle Lever
68. Strake
88. Lower Equ- ament Compartment
70. ID L>gt, DE NO (1)

F-16B

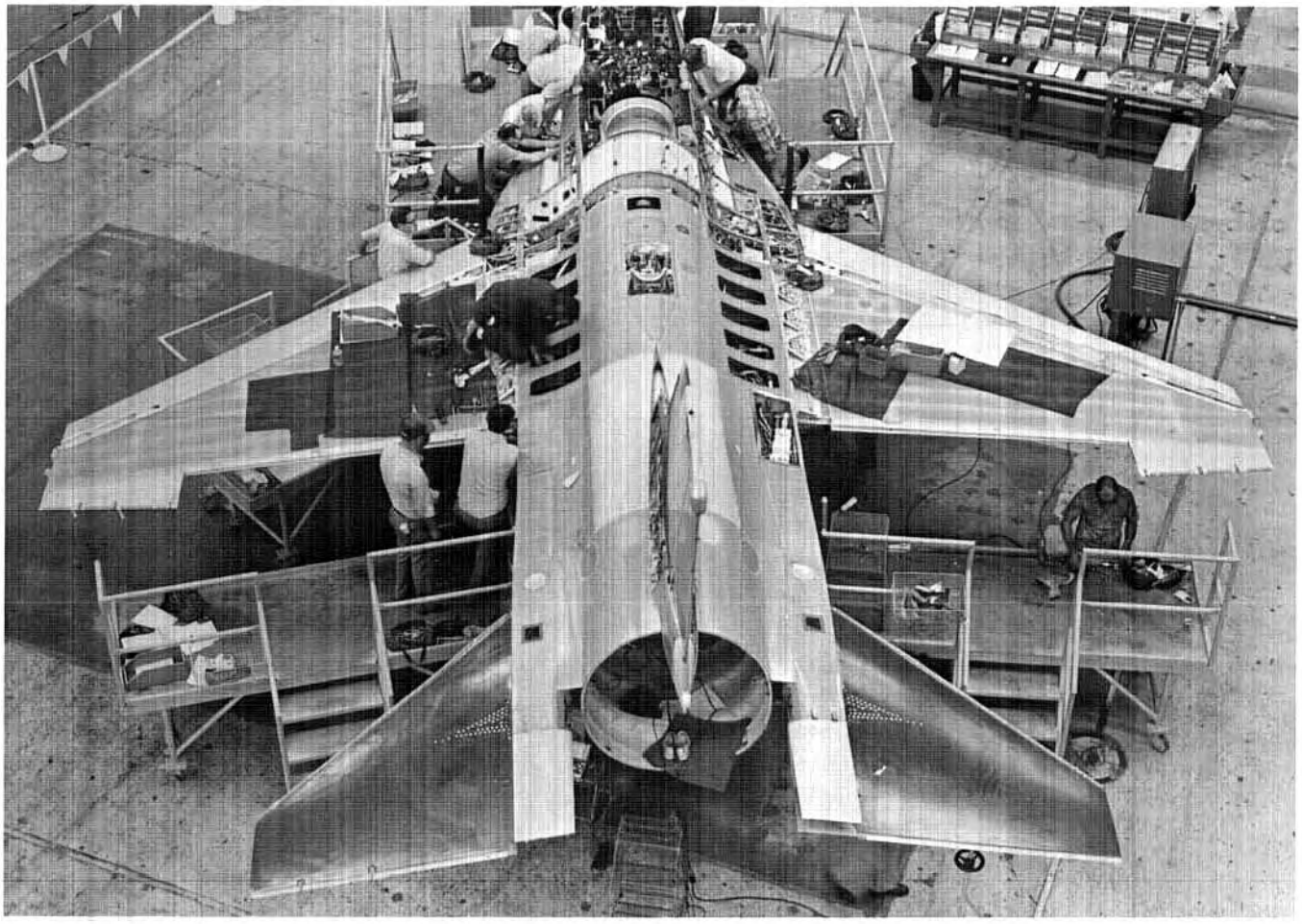


F-16A



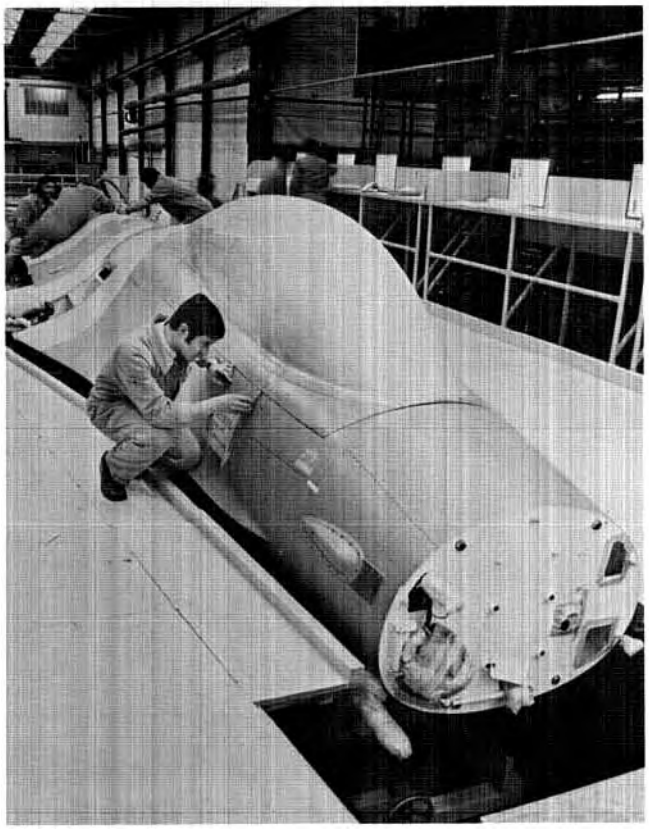
NOTE
DE NO (1) F-16A (All)
NO (2) F-16A/B (All)

ON THE ASSEMBLY LINE

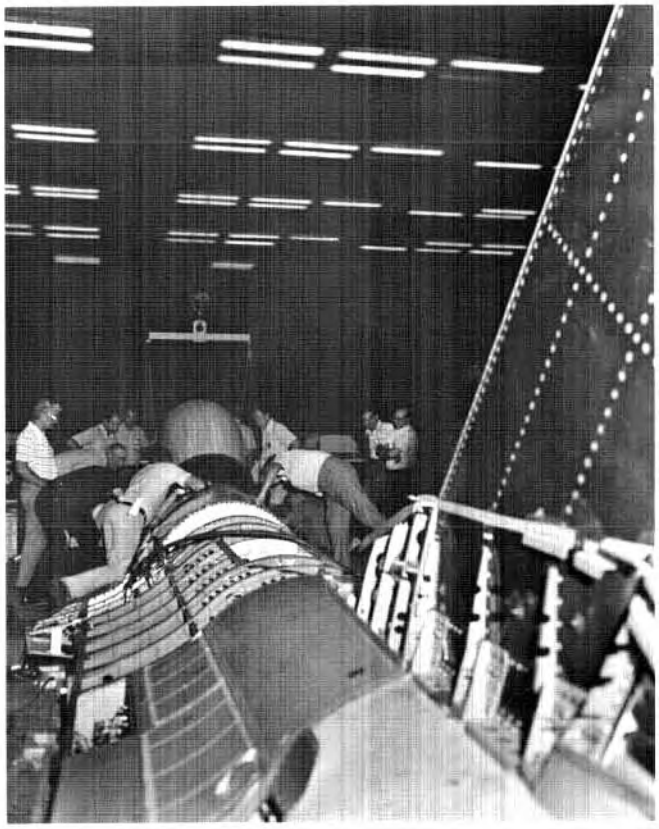


The photos on these two pages show F-16s on the assembly line at Fort Worth. In the photo above, the first F-16B nears completion. *(General Dynamics)*

Another F-16B receiving its wings. It is interesting to note that even at this point in the construction there is a ''remove before flight" streamer attached to the wing. The wings were built by SABCA of Belgium, and are the first major European-produced components. There are more than 50 component, avionic, and equipment items manufactured jointly by U.S. and European industry. *(General Dynamics)*



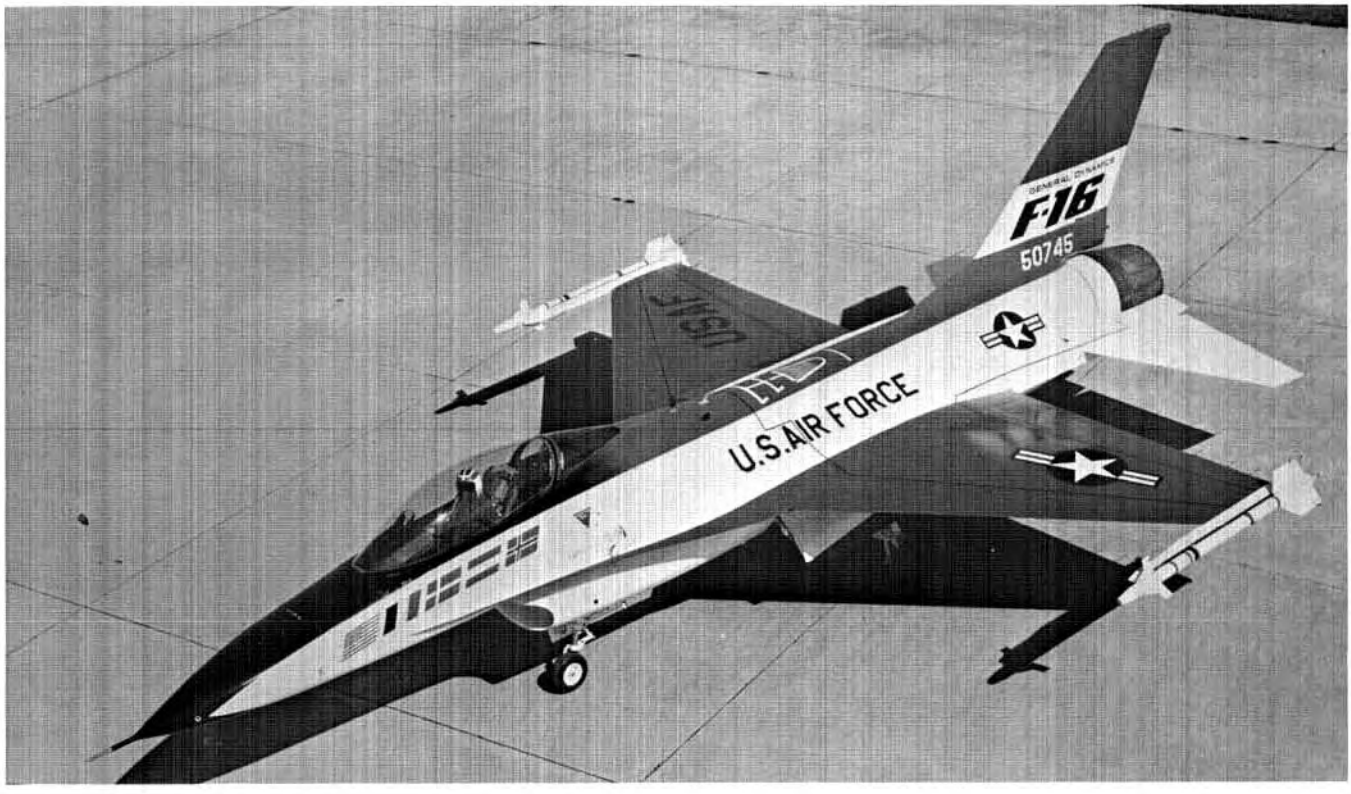
The assembly line at Gosse lies, Belgium where workmen are mating the forward, center, and aft fuselage components of the first F-16 to be assembled in Europe. (General Dynamics)



F-16A receiving its canopy. Note the ribs and bulkheads in the center fuselage section.

(General Dynamics)

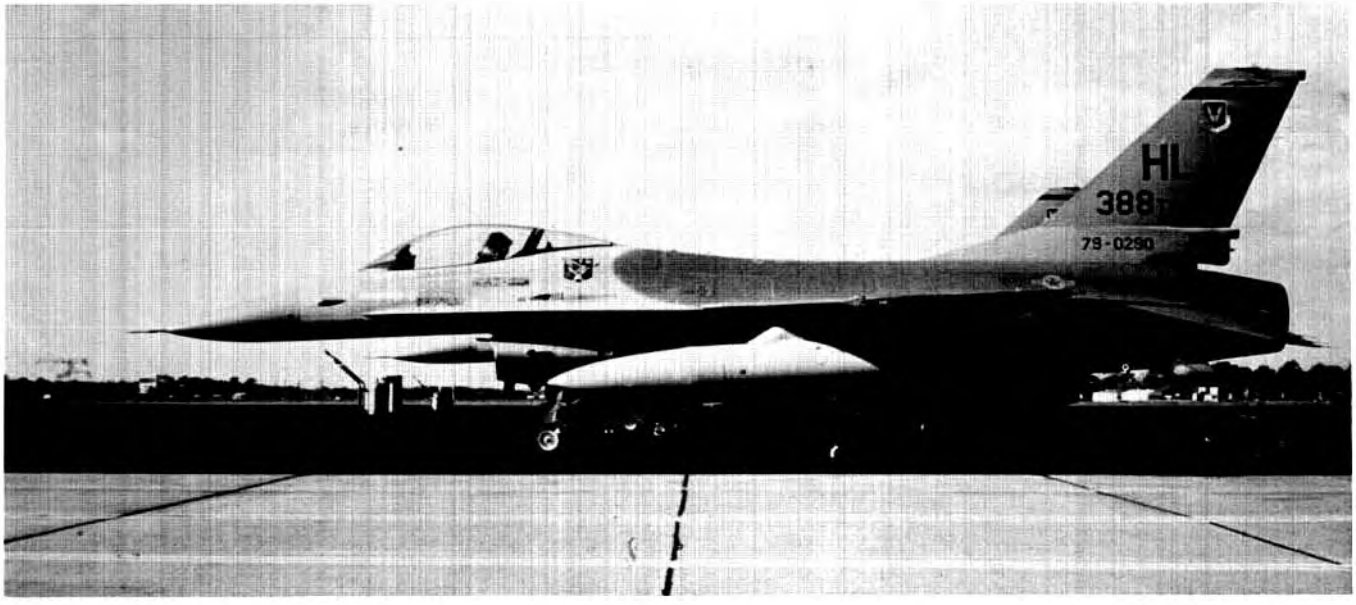
The first production F-16 at the end of the assembly line on August 17, 1978. *(General Dynamics)*



The first Full Scale Development aircraft which was rolled out of the General Dynamics Fort Worth plant on October 20, 1976. Being the U.S. bl-centennlal year, the aircraft retained the red, white, and blue scheme similar to the one used on the prototypes. (General Dynamics)

Two F-16s fly "escort" for a P-51 Mustang. The aircraft represent fighter technologies forty years apart. (General Dynamics)

WHAT'S IN A NAME?



F-16A, 79-0290, 4th TFS, 388th TFW, Commander's aircraft, used in the naming ceremony for the F-16 Fighting Falcon. ***(Rotramel)***

American warplanes have always been given names to denote their prowess and to give them something of a personality. Often, a given producer will have a series of aircraft with similar names such as the Grumman "Cat" fighters. In most cases the names are given at the time the aircraft is rolled out for the first time, or even before. Only the F-111 did not get in on receiving an "official" name, but unofficially it has been called the "Aardvark."

For some time it looked as though the F-16 was not going to have an "official" name. Prototypes, full scale development aircraft, and even a few production aircraft came off the production lines and flew before a name was chosen.

Close-up of the emblem worn on the left side of the fuselage of the aircraft shown above. The emblem was designed by Matt and Mark Waki, artists and IPMS modelers from Salt Lake City, Utah.

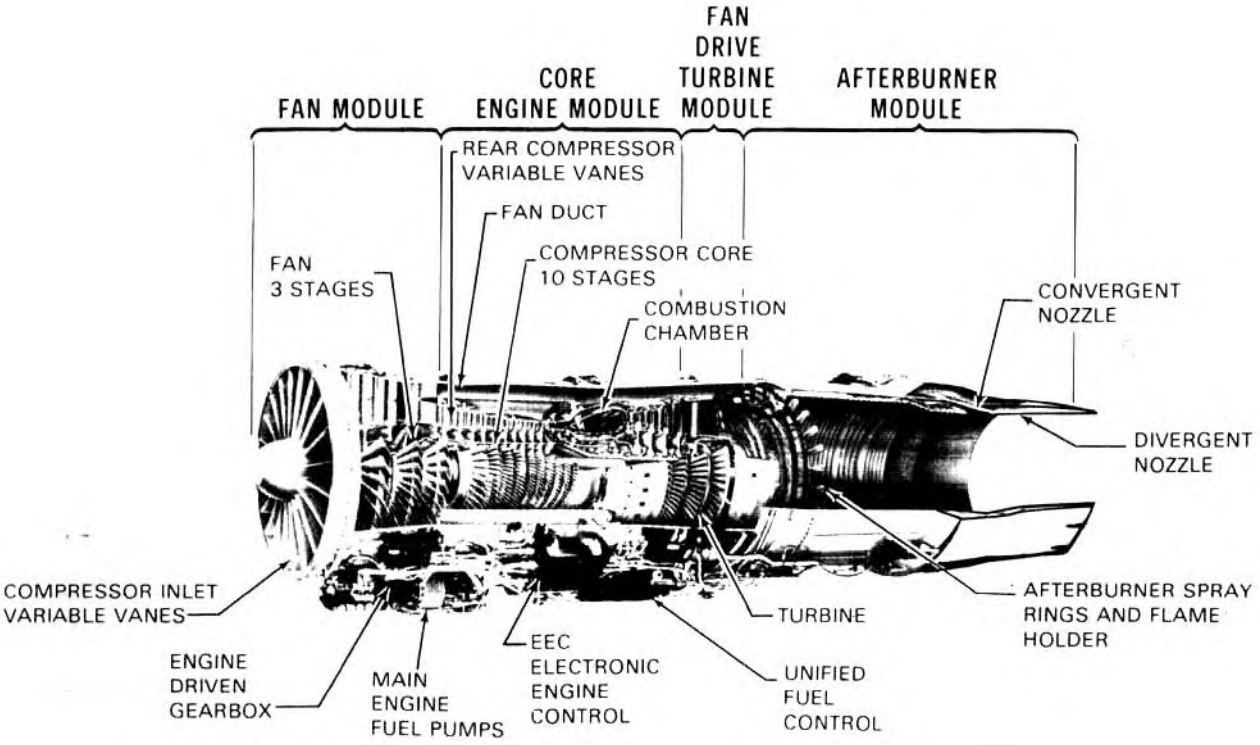
(Rotramel)

In 1977, General Dynamics proposed the name "Falcon". However, this was dropped because the name was already used fora Dassaultaircraft. Since "II" had been added to the names of famous and successful aircraft of the past, like LTV's Corsair II. the name "Mustang II" was proposed, but seemed inappropriate since General Dynamics did not build the original P-51 Mustang. Other names like "Eaglet" (a little F-15?), "Persuader" and "Condor" were proposed, and "Condor" almost made it. "Condor" even appeared in some publications as the name for the F-16, and a U.S. Air Force representative told Detail & Scale that "Condor" had been chosen as the official name. However, it did not turn out that way.

Fighter pilots flying the F-16 started kicking around the name "Viper", and that sounded appropriate enough, but that name was also discarded.

Finally, the naming problem went full circle and was back to "Falcon", but this time with "Fighting" added in front. On July 21. 1980, the name became official at a ceremony at Hill AFB, Utah. F-16A, 79-0290 was displayed with a special emblem commemorating the naming, and painted by artists and IPMS members, Matt and Mark Waki of Salt Lake City. Finally, three years after General Dynamics proposed the name "Falcon", the F-16 had itsofficial name, and it is one that seems most popularand appropriate.

F-100 ENGINE

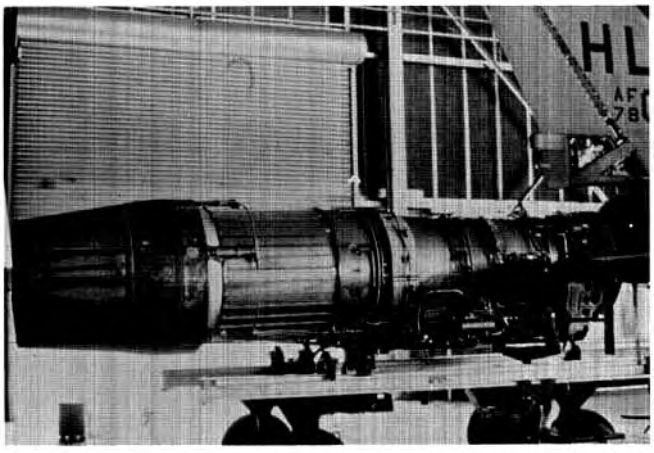


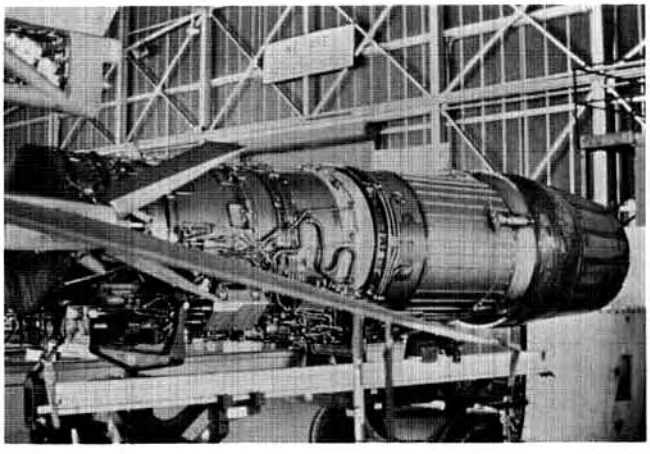
The F-16 was originally powered by a Pratt & Whitney F100-PW-100 engine which is also used in the F-15. However the engines vary between the two aircraft, and you could not pull an engine out of an F-15 and put it in an F-16.

Problems with the engine developed, and some crashed while wrapped in F-16 airframes. Turbine blades were separating and other problems cropped up. This caused Pratt & Whitney to work out remedies which included new blades, a new electronic engine control, and large proximity splitter vanes. With these improvements installed, the engine was redesignated, F100-PW-200, and Pratt & Whitney issued an unprecedented warranty covering the engines.

The engine produces some 25,000 pounds of thrust which yields a 1.1 to 1 thrust-to-weight ratio. The engine is smokeless, which eliminates the exhaust signature, “even a blind man could see," that was so prevalent with the F-4.

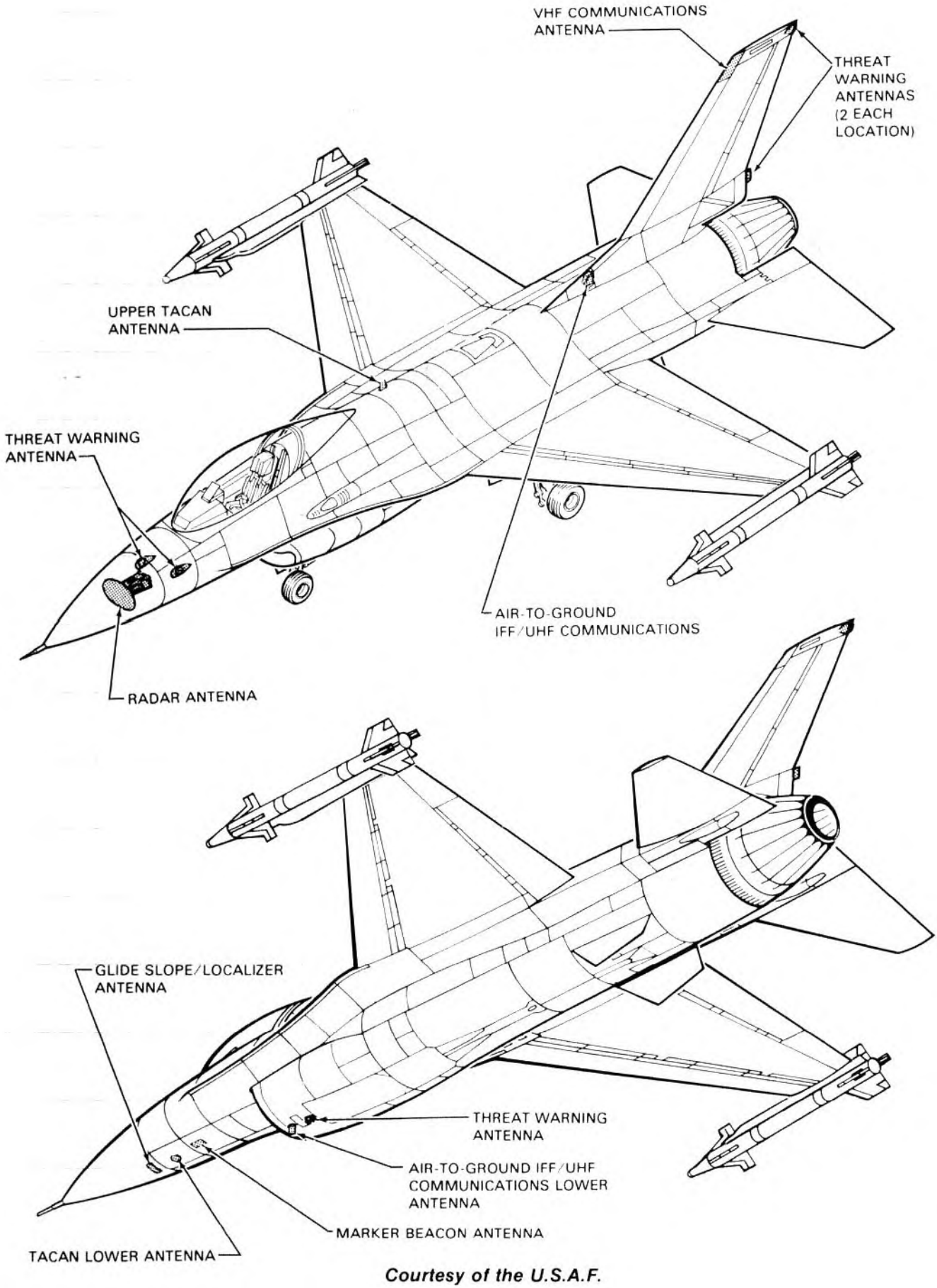
The engine as installed in the F-16 has a modular maintenance concept designed in. Internal inspection can be made with the engine in place in the aircraft through six boroscope ports. The starter, hydraulic pumps, and generator are mounted to the airframe rather than to the engine, and this arrangement contributes to a remarkably quick engine change time of only thirty minutes.





Right and left side views of an engine that has just been removed from an F-16A.

Antenna Locations



Courtesy of the U.S.A.F.

EVALUATING THE F-16

Aircraft number 4 during the evaluation held at RAF Lossiemouth. On the opposite page are more photos from this evaluation. (AAVS photo via Lloyd)

On June 7,1981, the Israeli Air Force used F-16s to attack Iraq's nuclear power plant, and thus provided the Fighting Falcon with its baptism of fire. The Israelis have since used the F-16 in combat in Lebanon. The U.S. Air Force has not, at this time, used the F-16 in combat, but continues to put it through its paces in realistic combat-type training exercises.

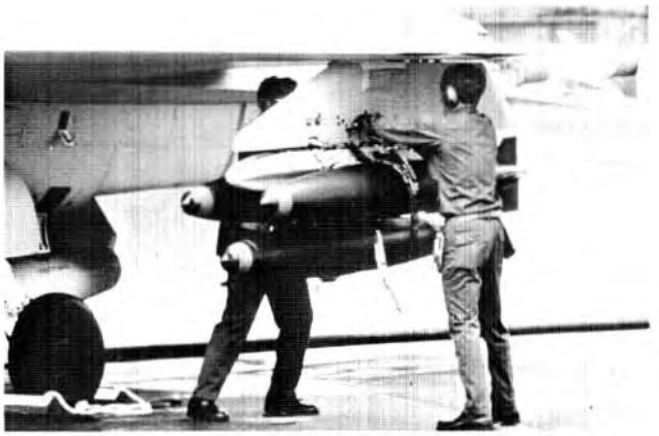
Red Max Alpha was conducted between March 11th and 13th, 1980. The exercise was designed to evaluate the aircraft, aircrews, and support personnel in flying and maintenance operations under wartime conditions. A total of 101 sorties were flown by 12 aircraft assigned to the 34th Tactical Fighter Squadron of the 388th TFW. The first day consisted of a 4,357-mile flight with refueling services provided by a number of KC-135A tankers from the 410th BW, K. I. Sawyer AFB; 19th BW, Robbins AFB; 161st ARG. Arizona ANG; 97th BW, Blyethville AFB; and the 96th BW, Dyess AFB. After 9.5 hours of flying to simulate an overseas deployment, the F-16s landed back at Hill AFB and were readied for two days of close air support and interdiction operations. Gunnery ranges in Idaho, Nevada, and Utah were used to simulate enemy strike targets. Bomb deliveries were made in excess of 450 mph and most of the hits were within 30 feet of the targets. The third day of operations included 61 sorties. Two of the 12 aircraft flew 7 missionsthatday. Nineofthe aircraft were combat ready at the conclusion of the exercise.

Between April 15th and 18th, 1980, Operation Sea Strike 80-2 was conducted. The operation was a composite forces training exercise designed to combine various fighter aircraft types with different roles in a realistic aerial warfare scenario. Operations included F-4s, F-15s, F-4G and F-105 Wild Weasels, F-111s, and A-7Ds along with the F-16s of the 388th TFW.

Yellow Max Alpha was flown between June 23rd and 27th, 1980. This time F-16s from the 4th TFS, 388th TFW were evaluated. The exercise required the squadron to generate 18 mission-ready aircraft and 6 spare aircraft. Six aircraft were ready for initial deployment within one hour of being alerted. Over the three-day flying portion of the exercise, 140 sorties were flown. On the last day of the exercise 18 of the aircraft flew 72 sorties. Air-to-air and air-to-ground missions were flown over five ranges in Idaho, Nevada, and Utah. The squadron had surpassed all of the established goals.

An Operational Readiness Inspection (ORI) was conducted between October 23rd and 27th, 1980, to prove that the 388th TFW and the F-16 aircraft was combat ready for worldwide operation. The ORI required the 388th TFW to generate 24 primary and 8 spare aircraft within the first 24 hours of the inspection. All 32 aircraft were made available well within the allotted time. For the second phase, at least 24 aircraft had to launch and successfully refuel from a tanker. Again all 32 aircraft met their tanker times. Twenty-four aircraft then proceeded with the remainder of the exercise. In the combat employment phase of the ORI the 24 aircraft scored 95% in the

Number 4 (79-386) and number 2 (79-362) during turn-around. Note that the entire triple ejector rack (TER) Is loaded as one unit with the three bombs already attached. (AAVS photos via Lloyd)



Turn-around time for an aircraft means the time It takes to refuel and rearm so as to get It ready for the next mission. Here, ground crews and pilots hustle to achieve a remarkable turn-around time of about 10'/: minutes. (AAVS photos via Lloyd)

182 sorties that they flew. At the conclusion of the employment phase of the ORI, 22 of the 24 F-16s remained mission-capable and, if required, the other two aircraft could have been brought up to readiness status.

Perhaps the most impressive performance of the F-16 thus far was its participation in the Royal Air Force Bomb Competition which was held at RAF Lossiemouth, Scotland, from June 15 thru 18, 1981. Also participating in the competition were RAF Jaguars, Buccaneers, and U.S. Air Force F-111 s from Lakenheath, U.K.

The F-16s from the 388th TFW at Hill AFB, Utah, scored 7,831 points out of a possible 8000, for airfield and convoy attacks, and averaged a 10.5 minute turn-around time for the four day competition. The 7,831 points was more than 1000 points ahead of the second place team.

During the competition the aircraft flew missions where they encountered as many as 24 “enemy" aircraft, and they also had to avoid SAM missile sites. The F-16s "killed” 88 aggressors, and lost only one of their own number to a SAM site. By comparison, the other teams managed only one "kill" against the 24 RAF Phantoms and Lightnings, while suffering 42 losses. To make this all the more remarkable, the F-16s never used afterburners during the entire competition.

The F-16s used for this competition were painted in special markings, and the photos on these two pages were taken during the competition. This remarkable showing by the F-16s in their first international competition is the most positive proof possible in peacetime of the aircraft's combat capabilities.

THE F-16A

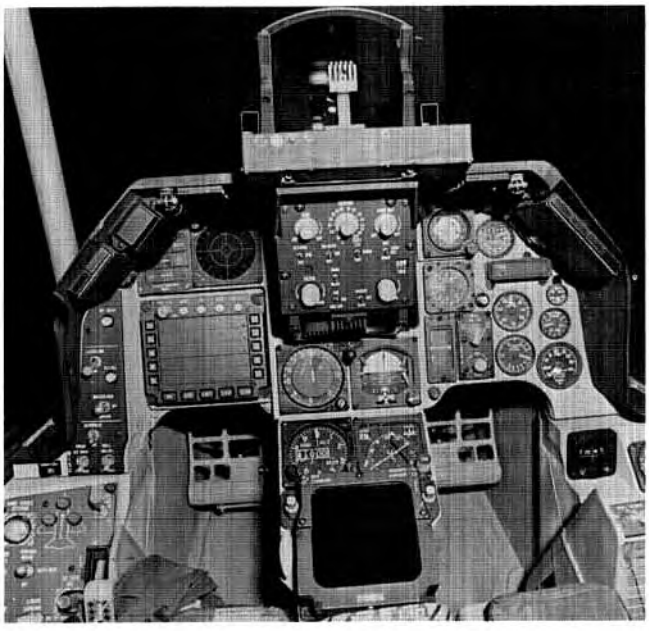
Israeli F-16 In flight over the United States. Note the position of the leading edge flaps and the speed brakes. During the time they were in the United States, Israeli F-16s carried two U.S. national Insignia under the wings. (General Dynamics)

The F-16 is designed to provide an aircraft with advanced technologies at a low cost. A fly-by-wire flight control system provides precise, responsive control which enables the pilot to fully utilize the aircraft's excellent maneuvering capability. The seat is inclined 30 degrees to increase the pilot's "G" tolerance, and the canopy is a bubble type providing the pilot with excellent all-around visibility. These features help make the F-16 an excellent clear-air "dogfighter", but the features don't stop there. Wing camber is changed automatically to provide the most efficient wing shapes needed for optimum performance across a wide range of varied flight conditions. The leading edge flaps are positioned automatically as a function of Mach numberand angleof attack in order to minimize drag, increase maneuverability, and significantly reduce buffet.

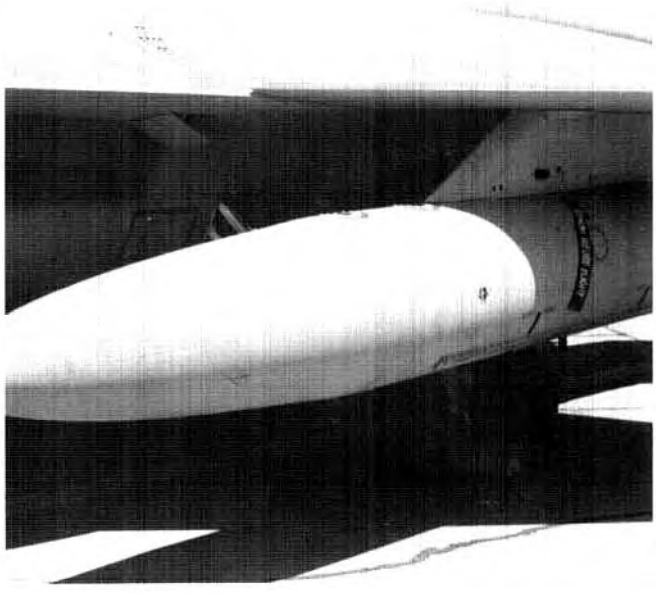
The design of the blended wing-body enhances the performance of the aircraft, reduces transonic drag, and increases body lift at high angles of attack. The resulting enlarged fuselage cross-section derived from this design provides for a greater internal volume which helps the F-16 achieve a high ratio of fuel to gross weight that is necessary for outstanding range and endurance. According to General Dynamics, the F-16hasoverthree times the rangeof an F-4E.

With the large purchase of F-16s by the U.S. Air Force and several other nations, it seems certain that the F-16 is destined to earn a place in military aviation history equal to that of the F-4 Phantom. Planned improvements and variations seem to assure a lifespan into the twenty-first century, and with an airframe life of 8000 hours, even the first F-16s off the production line should be with us for a long time.

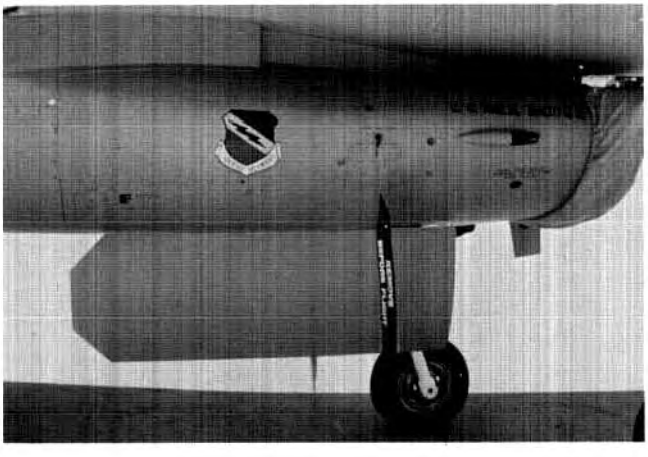
F-16A DETAILS



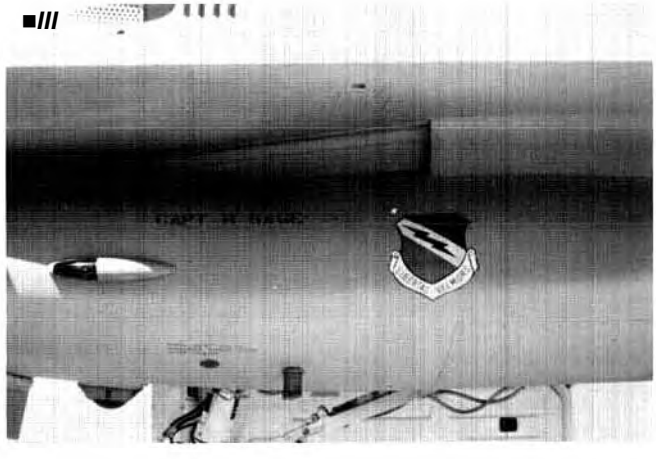
Instrument panel In a Block 15 F-16A. Compare this with the original Instrument panel as shown on page 36. (General Dynamics)



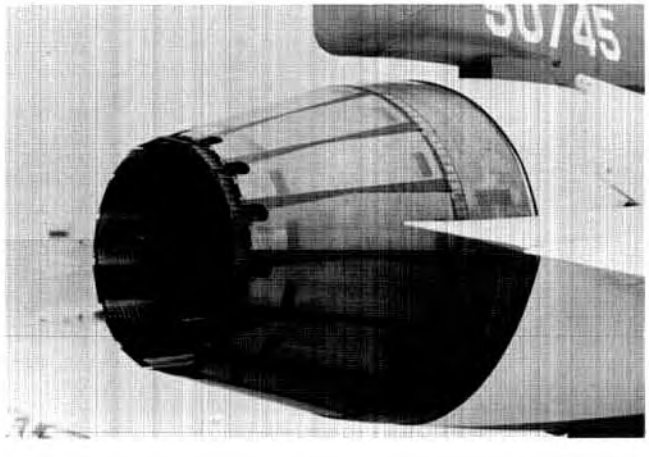
Leading edge flap in the retracted position. Note that in this position the flap is slightly higher than the fuselage at the point where they meet.(Nesset)



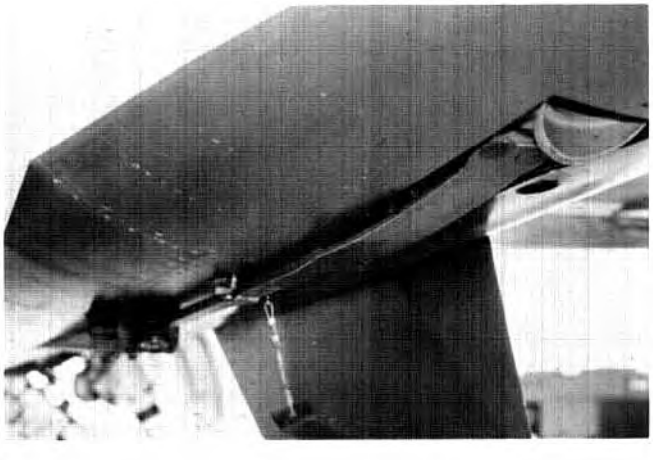
Right side of intake. Notice the light, antennas, and the shape of the one-piece nose gear door.



Leftside of intake. Note the shading of the grays in this area.

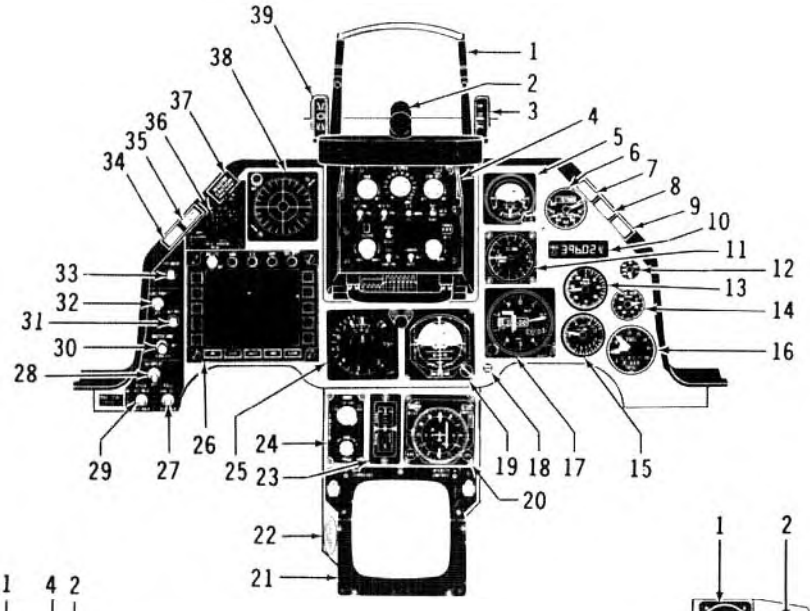


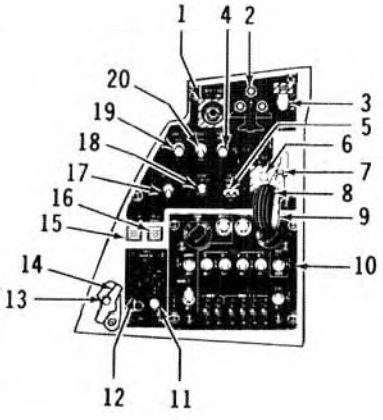
Afterburner eyelid in the closed position. (Huston)

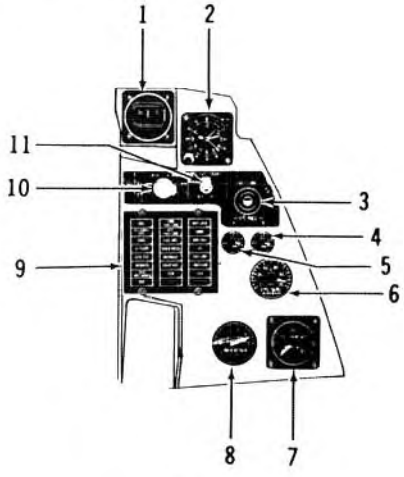


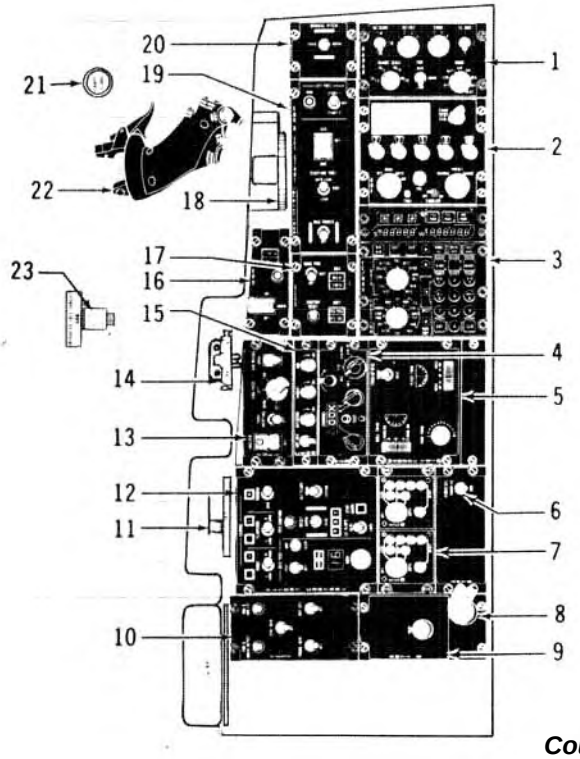
Tail hook detail. (Huston)

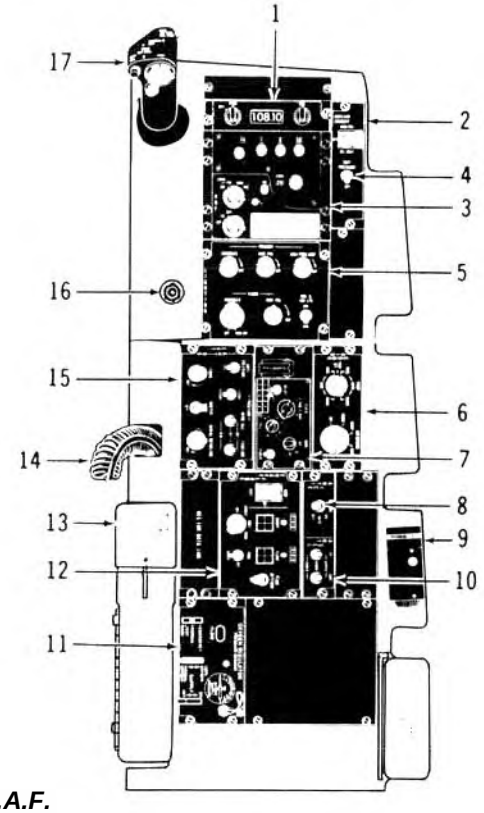
F-16A COCKPIT LAYOUT











Courtesy of the U.S.A.F.

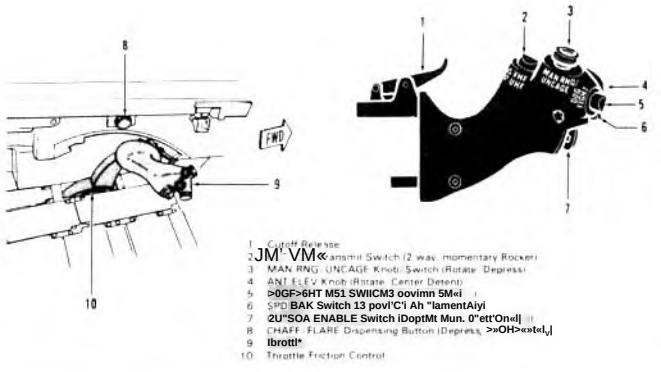
KEYS TO CALLOUTS INDICATED ON OPPOSITE PAGE.

21 Radar/EO Display
22 Rudder PEDAL ADJ Knob
23 AOA Indicator
24 Instrument Mode Select Panel
25 Airspeed Mach Indicator
26 Stores Control Panel
27 Autopilot ROLL Mode Switch
28 AUTOPILOT Switch
29 Autopilot PITCH Mode Switch
30 MASTER ARM Switch
31 ALT REL Button
32 SMS PWR Switch
33 IFF IDENT Button
34 ENG FIRE Warning Light (Red)
35 T.O./LAND CONFIG Warning Light (Red)
36 THREAT WARNING Controls and Indicators
37 MASTER CAUTION Light (Amber)
38 THREAT WARNING Azimuth Indicator
39 AOA Indexer

1 EMER STORES JETTISON B' tlon (Covered)
2 WHEELS Down Lights (Green)
3 Arresting HOOK Switch (Lever Lock)
4 PARKING BRAKE ANTI SKID Switch
5 LANDING TAXI Lights Switch
6 Landing Gear Handle Downlock Release (ON LOCK REL) Button
7 Landing Gear Handle Down Permission Button
8 Landing Gear Position Warning Light (Red)
9 Landing Gear Handle
10 IFF Control Panel
11 THREAT WARNING AUX (DIM) Control Knob
12 THREAT WARNING AUX Controls and Indicators
13 Landing Gear Selector Valve Reset Button
14 ALT GEAR Down Actuation Handle
15 LE Flap Position Indicator
16 Speedbrakes Position Indicator
17 STORES CONFIG Switch
18 Landing Gear Warning HORN SILENCER Button
19 GND JETT ENABLE Switch
20 BRAKES Channel Switch

1 Radar Control Panel
2 UHF Radio Control Panel
3 Fire Control Navigation Panel (FCNP)
4 TACAN Control Panel
5 Manual Trim Panel
6 VIDEO SEL Switch
7 ECM Pod Control Panel
8 Anti-G Suit Hose Connection
9 Anti-G Test Panel
10 Test Switch Panel
11 DEFOG Lever
12 Flight Control Panel
13 Fuel Control Panel
14 CANOPY JETTISON Handle
15 Communications Control Panel
16 EPU Control Panel
17 Electrical System Controls
18 Throttle FRICTION Control
19 Engine & Jet Start Control Panel
20 MANUAL PITCH Override Switch
21 CHAFF'FLARE Dispenser Button
22 Throttle
23 REDUCED IDLE THRUST Switch (Inoperable)

Throttle Quadrant



1 Cutoff Release
2 JM' VM« ansmit Switch (2 way, momentary Rocker)
3 MAN RNG (UNCAGE Knob) Switch (Rotate Depress)
4 ANT ELEV Knob (Rotate, Center Detent)
5 >0GF>6HT M51 SWIICM3 oovimn 5M«i
6 SPD BAK Switch 13 povl'C'i Ah "lamentAiyi
7 2U"SOA ENABLE Switch iDoptMt Mun. 0"ett'On«l|
8 CHAFF FLARE Dispensing Button (Depress) >»OH><»t«t,|
9 Ibrottl*
10 Throttle Friction Control

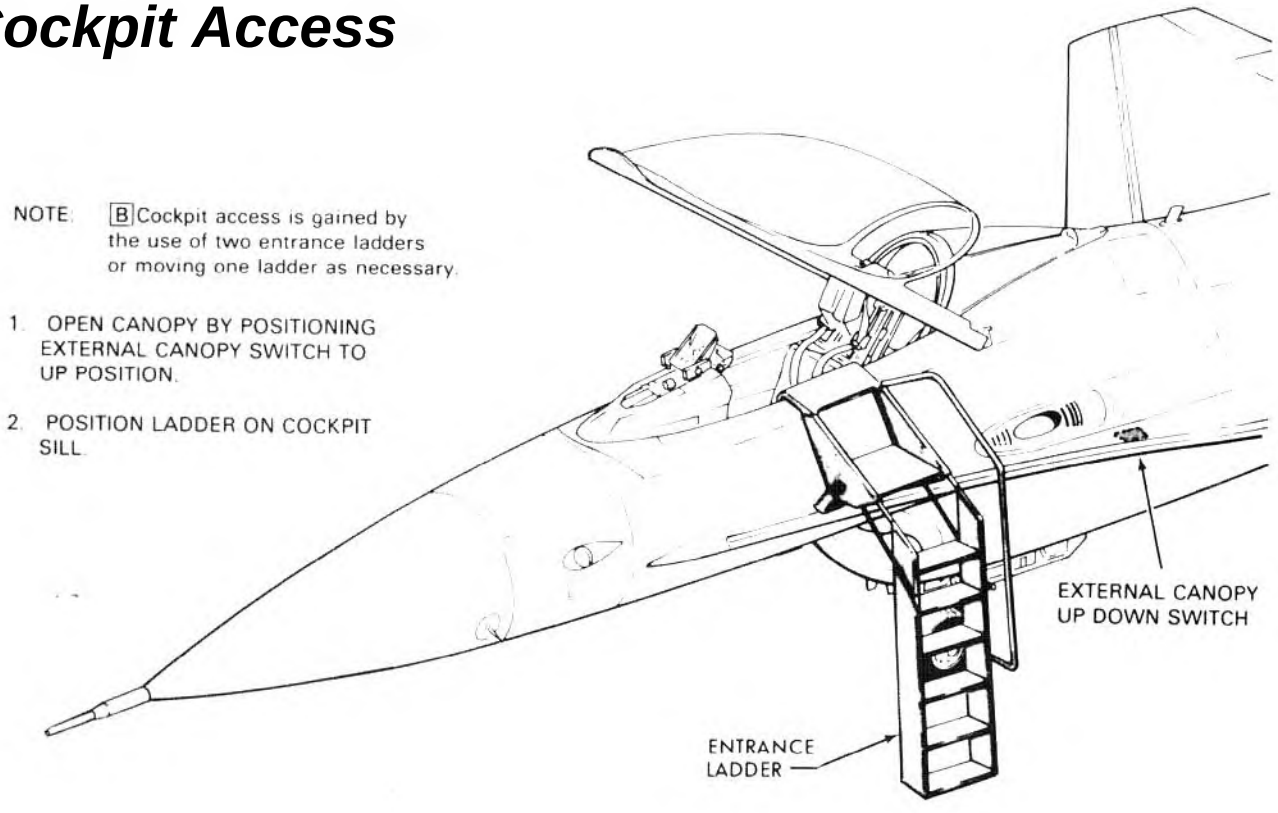
1 HUD Combiner Glass
2 Television Sensor
3 Air Refuel Status NWS Indicator
4 HUD Control Panel
5 Standby Attitude Indicator
6 Fuel Flow Indicator
7 DUAL FC FAIL Warning Light (Red)
8 HYD/ OIL PRESS Warning Light (Red)
9 CANOPY Warning Light (Red)
10 Radio Channel Frequency Indicator
1 1 Vertical Velocity Indicator
12 Oil Pressure Indicator
13 Tachometer
14 Nozzle Position Indicator
15 FTIT Indicator
16 Engine Fuel Quantity Indicator
1 7 Altimeter
18 MRK BCN Light
19 Attitude Director Indicator (ADI)
20 Horizontal Situation Indicator (HSI)

1 Standby Magnetic Compass
2 Clock
3 Oxygen Flow Indicator
4 System 8 Hydraulic Pressure Indicator
5 System A Hydraulic Pressure Indicator
6 EPU Fuel Quantity Indicator
7 Cabin Altimeter
8 Liquid Oxygen Quantity Indicator
9 Caution Light Panel
10 FUEL QTY SEL Knob
11 EXT FUEL TRANS Switch

1 ILS Control Panel
2 NUCLEAR CONSENT Switch
3 VHF Radio Control Panel
4 SUIT PRESSURE Vent Switch
5 Interior Lighting Control Panel
6 Air Conditioning Control Panel
7 Secure Voice Panel
8 ENGINE ANTI ICE Switch
9 Utility Light
10 Antenna Select Panel
11 Oxygen Regulator Panel
12 Chaff Flare Control Panel
13 Map And Data Stowage
14 Oxygen Communications Hookup
15 Exterior Lighting Control Panel
16 BUC GND TEST Button
17 Side Stick

Courtesy of the U.S.A.F.

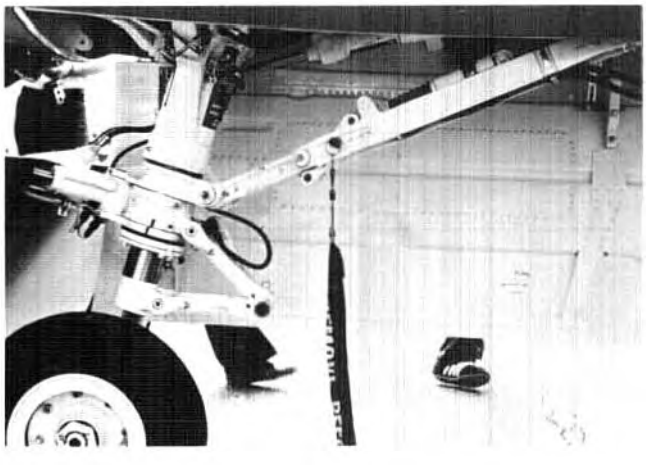
Cockpit Access


NOTE: [B] Cockpit access is gained by the use of two entrance ladders or moving one ladder as necessary.
1. OPEN CANOPY BY POSITIONING EXTERNAL CANOPY SWITCH TO UP POSITION.
2. POSITION LADDER ON COCKPIT SILL.
EXTERNAL CANOPY UP DOWN SWITCH
ENTRANCE LADDER

Courtesy of the U.S.A.F.

F-16B, 78-089, at Hill AFB showing position of two boarding ladders as used on the F-16B. (Nesset)

NOSE GEAR DETAIL



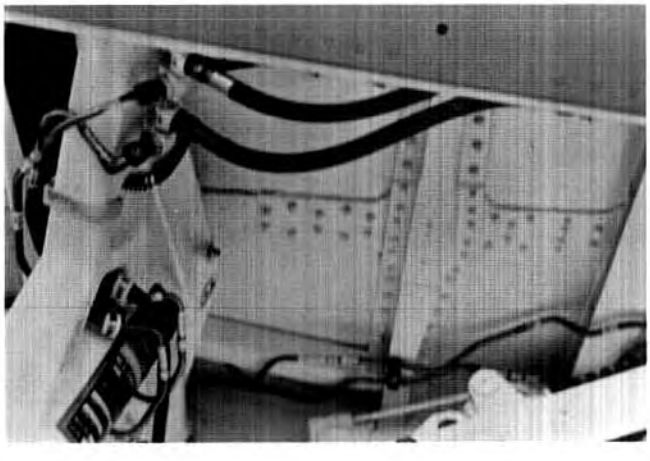
Above left: Nose gear from left.

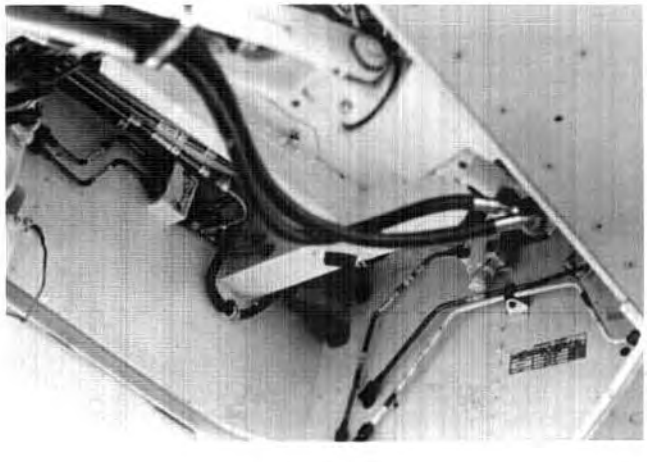
Above right: Nose gear from front. Note the actuating cylinder on the nose door.

Right: Close-up of gear struts, braces, and torque link. (Spidle)

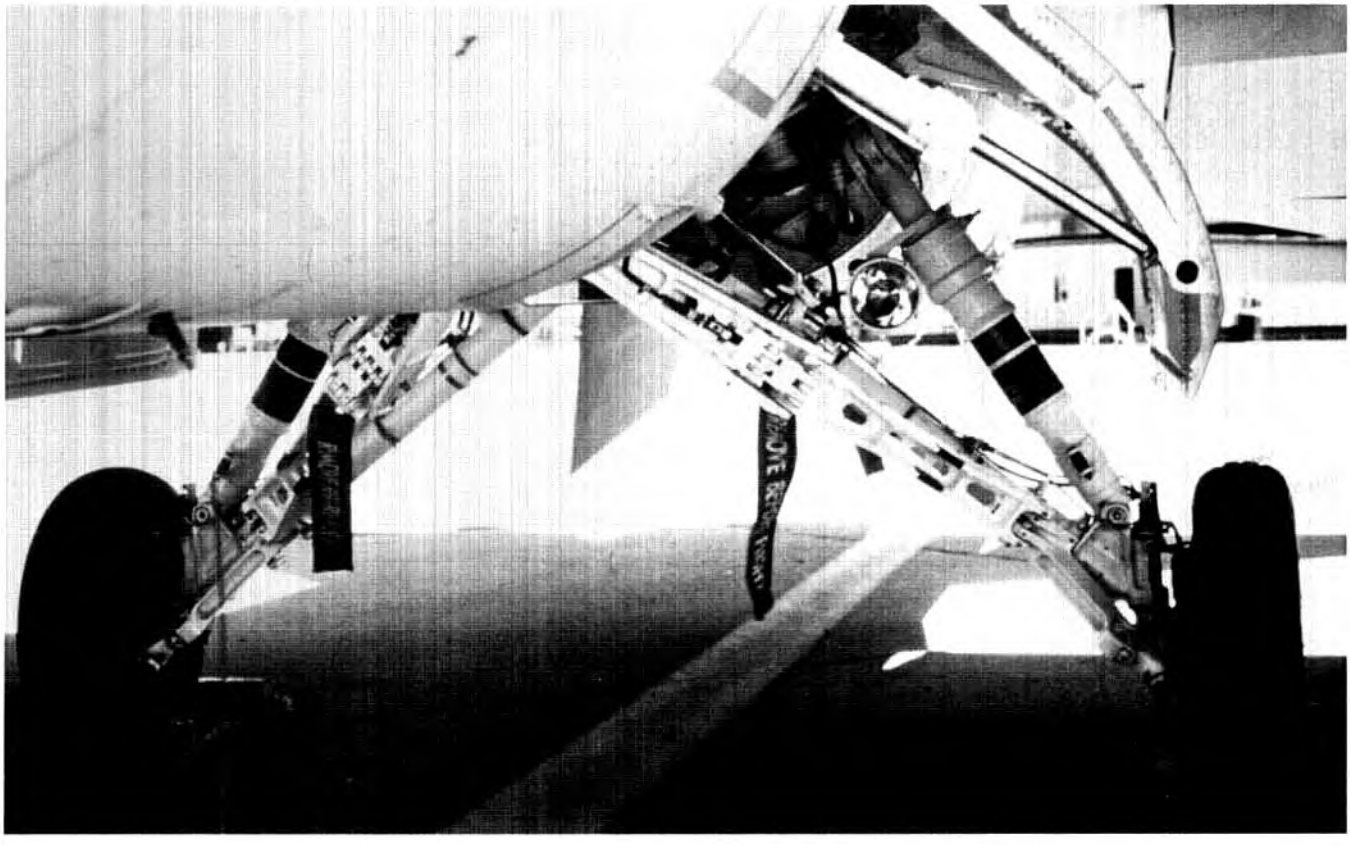
Below left: Forward portion of nose gear well. (Spidle)

Below right: Rear portion of nose gear well. The bottom of the Intake forms the top of the well.(Spidle)

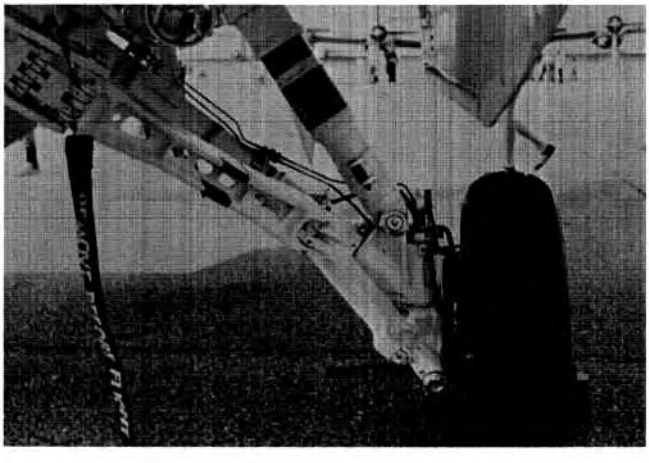




MAIN GEAR DETAIL



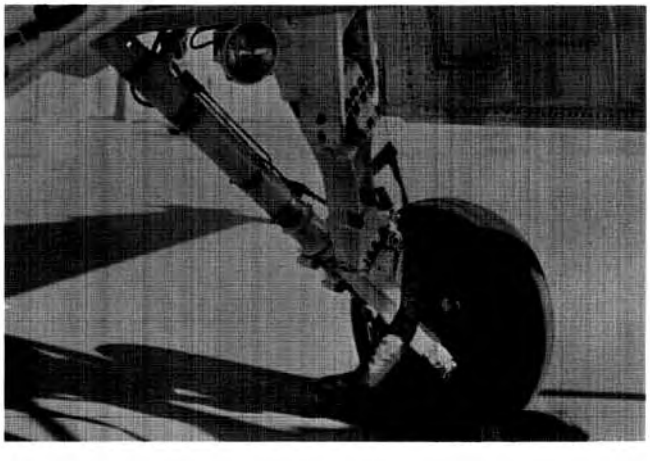
F-16 main landing gear from front. In this view note the actuating cylinder for the gear door. (Nesset)

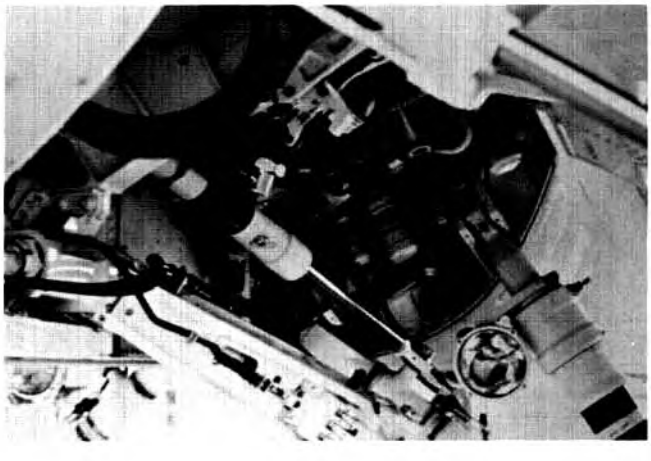


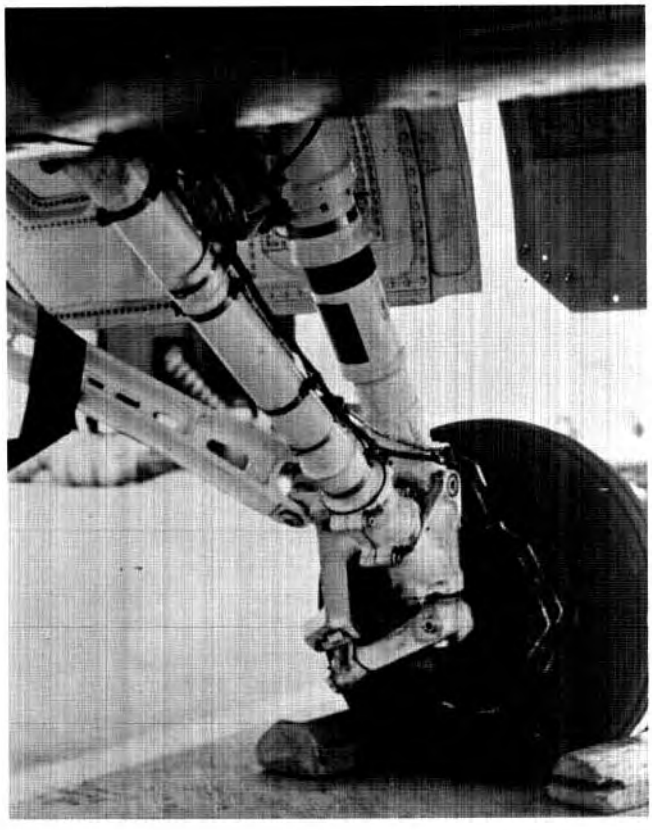
Left: Left main landing gear from front. (Spidle)

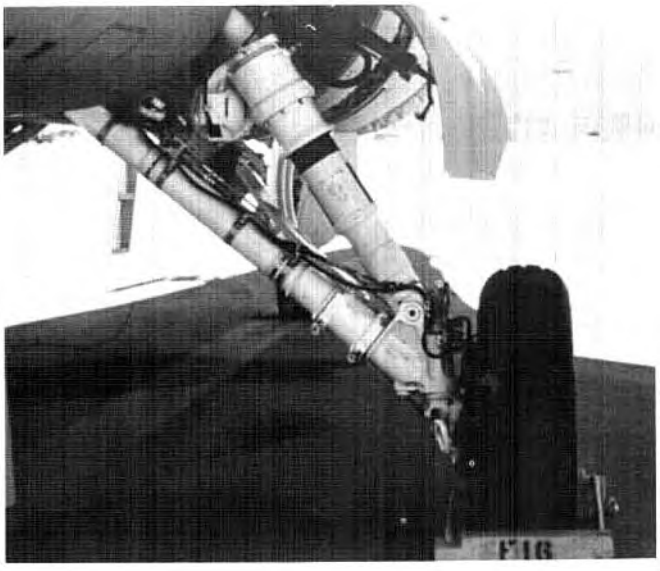
Below left: Left main landing gear. Note the landing light. (Nesset)

Below right: Left main landing gear wheel well. (Nesset)



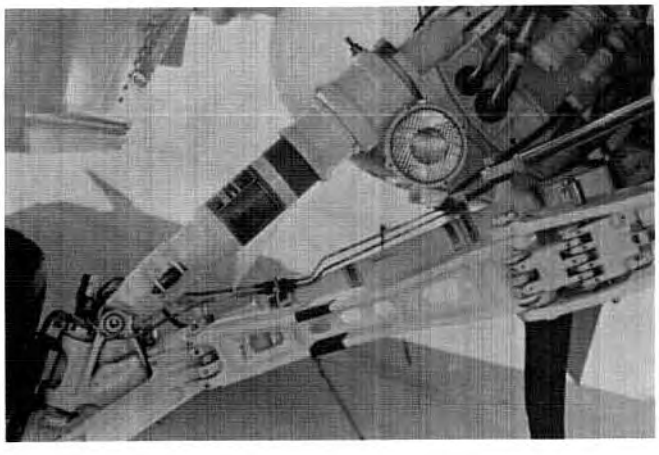






Above left: Right main landing gear from under the aircraft and slightly behind. (Huston)

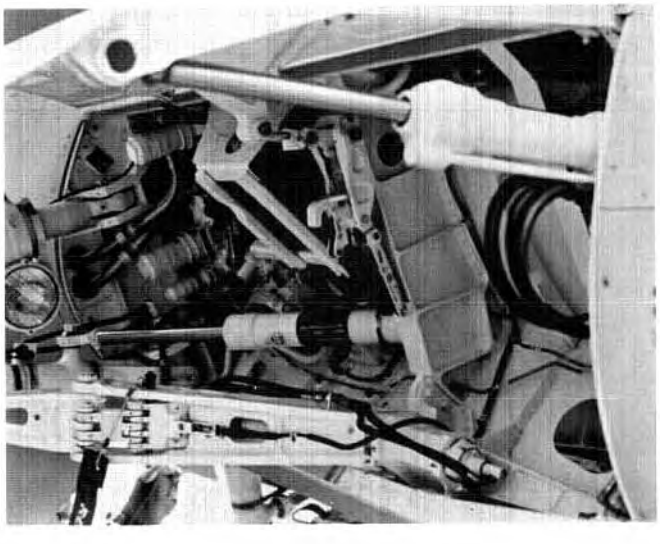
Above right: Right main landing gear from behind. (Nesset)



Right: Right main landing gear from front. Note how there Is a shock absorber arrangement rather than the usual oleo. (Nesset)

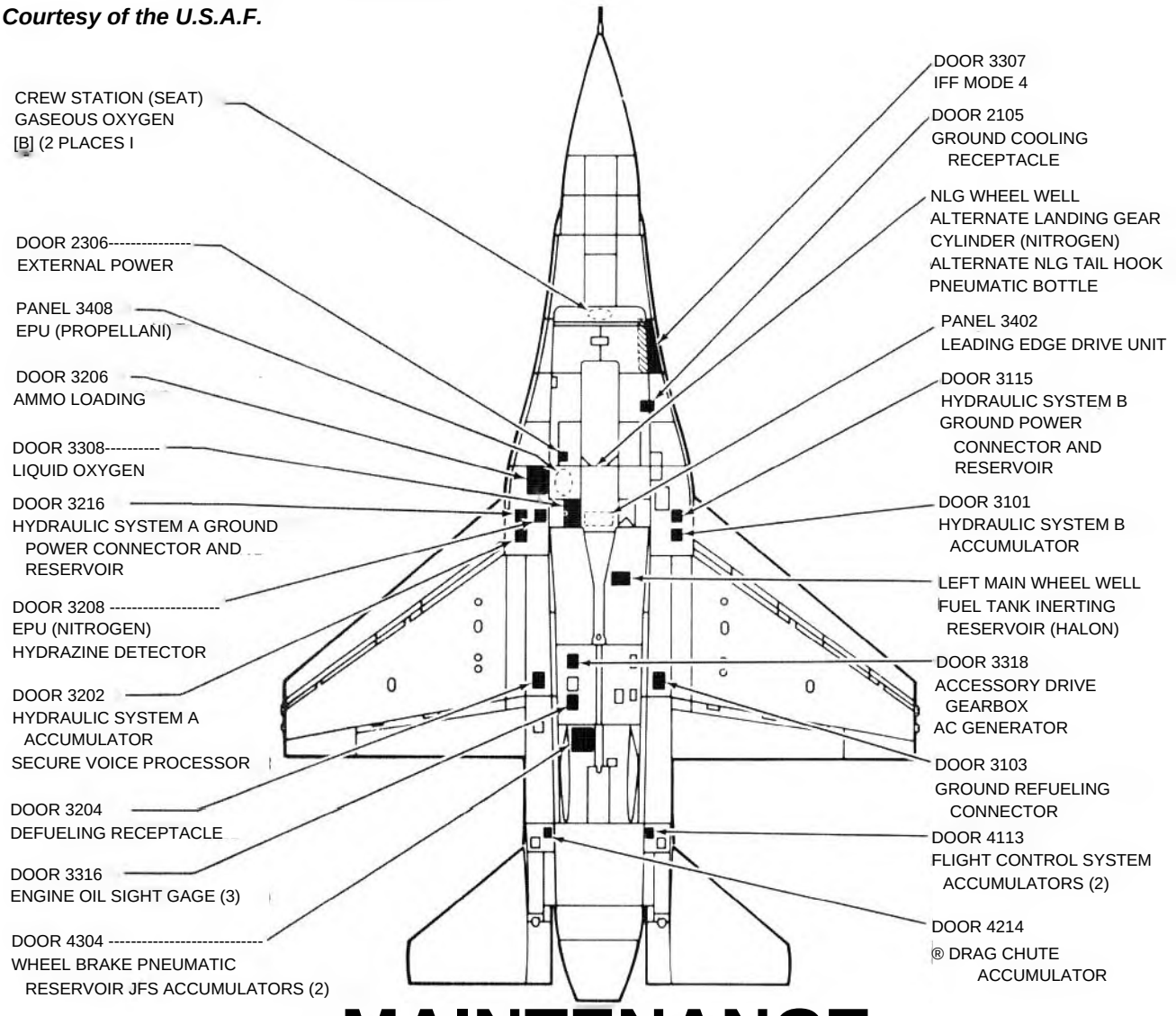
Below left: Wheel and tire on right landing gear. (Spidle)

Below right: Right main landing gear wheel well. (Spidle)



Servicing Diagram

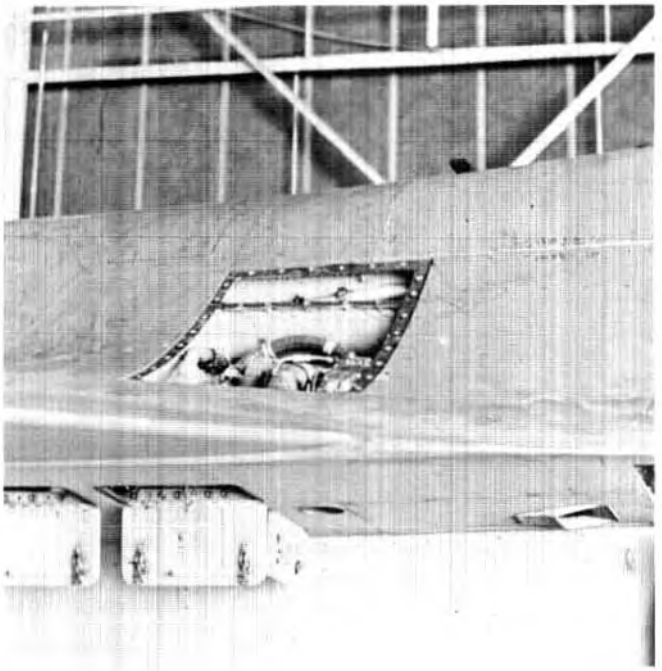
Courtesy of the U.S.A.F.

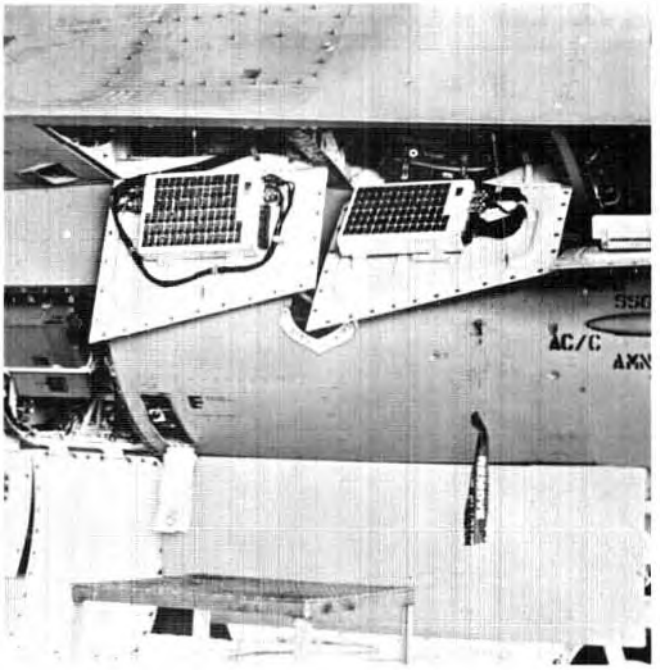


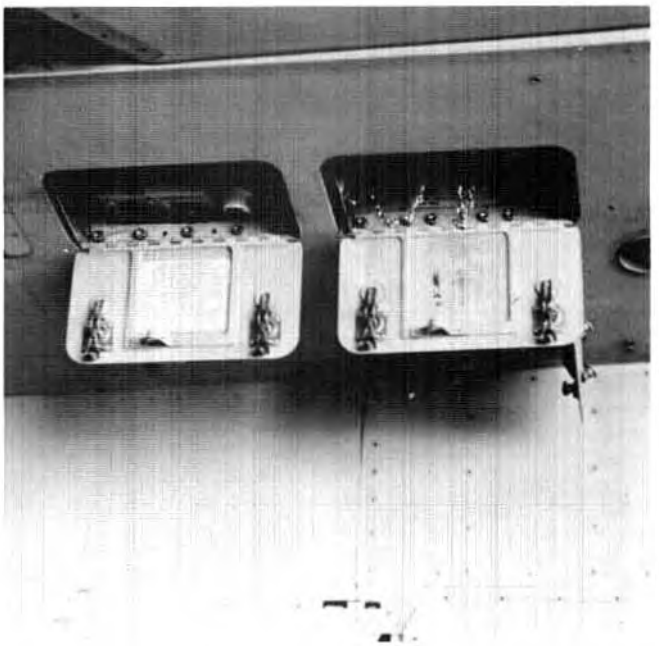
MAINTENANCE

The more expensive airplanes become, the fewer numbers an air force can purchase, and the fewer planes an air force has, the more use it must get out of those that are available. Fifty planes that can fly four sorties a day can be just as good as one-hundred planes that can only fly two sorties. The fifty-plane arrangement may even be better because they only take half the pilots and ground crews of the one-hundred plane force. This is an oversimplification. but the basics hold true. The most important thing is not how many aircraft you have, but how many you can keep in the air over a period of time

This is what makes maintainability so important The easier and faster an aircraft can be maintained and serviced, the higher readiness state it will be able to achieve. For a modern, sophisticated fighter. the F-16 is amazingly easy to service. Turn-around time averaging 10.5 minutes were accomplished at the RAF bombing meet mentioned earlier, and an entire engine can be changed in thirty minutes. Maintenance requirements are minimized through the use of extensive built-in-test equipment (BITE), self-tests, and status indicators. Easy-to-reach access panels provide quick inspection and maintenance, all contributing to reduced servicing time. In all there are 228 access doors, and sixty percent of the skin is removable. Eighty percent of the equipment in the aircraft is accessable from the ground level, and onlyfourtoolsare required to perform the work. What all of this means is that the F-16 can fly more missions in the same amount of time than larger numbers of other types of aircraft, and the importance of this readiness state cannot be overemphasized.







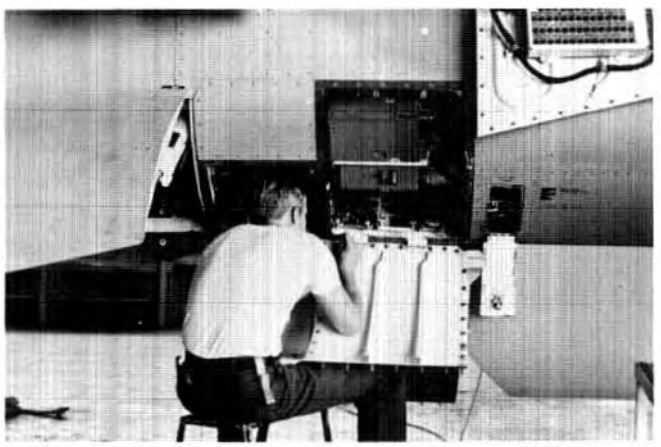
Above left: Much of the F-16'sskin is easily removable to allow easy access to important components.

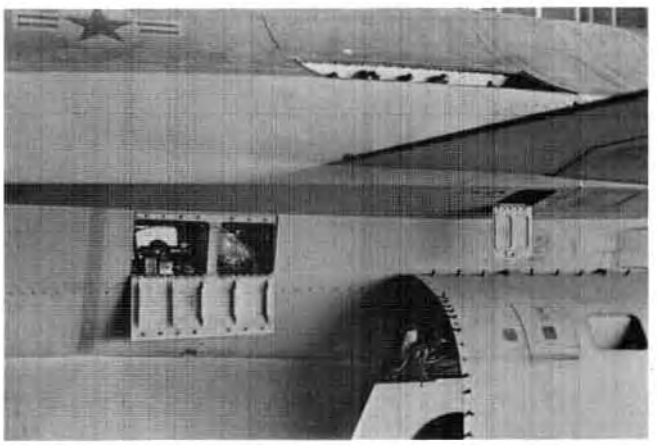
Above right: Open access panels just above the intake on the right side of the aircraft.

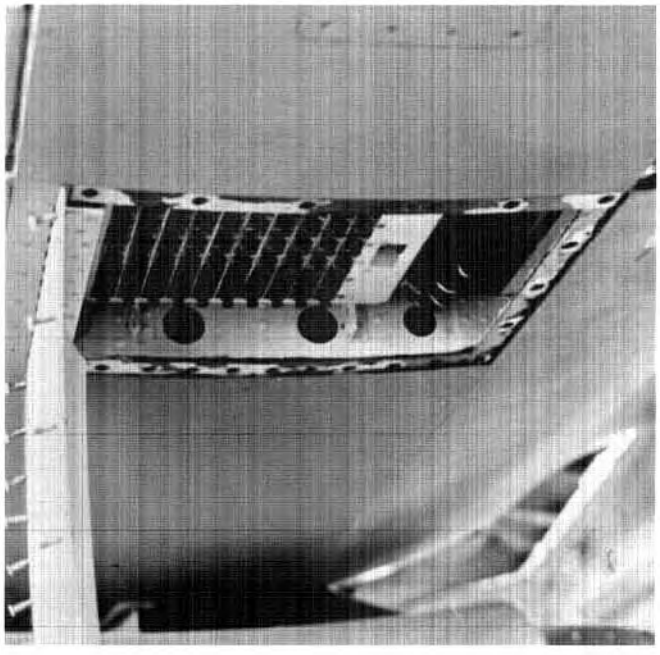
Right: These two small doors under the right wing root are doors 3216 and 3202. See the diagram on the opposite page for an explanation of the purpose of these doors.

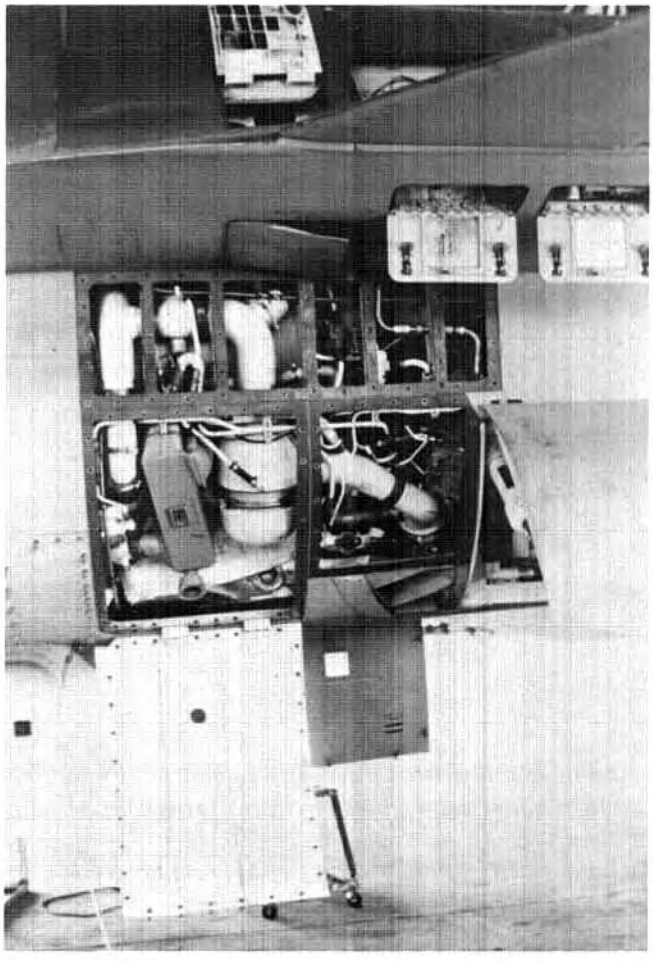
Below left: A maintenance man demonstrates the ease of working on the F-16 as he sits on a stool and works on equipment located just in front of the right main landing gear well.

Below right: More open panels just above and in front of the right strake.







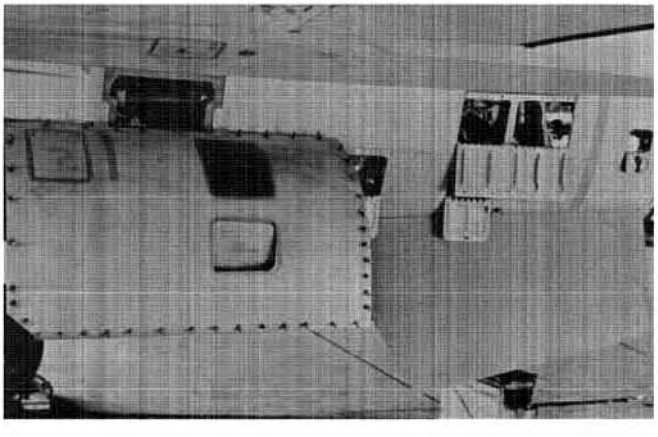


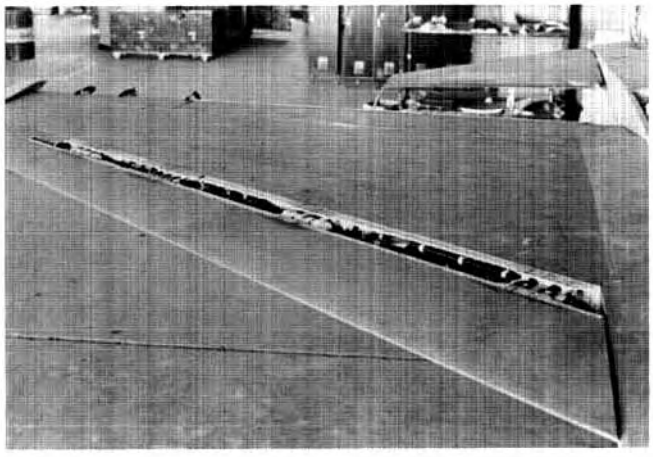
Above left: Open panel under the nose and just in front of the intake.

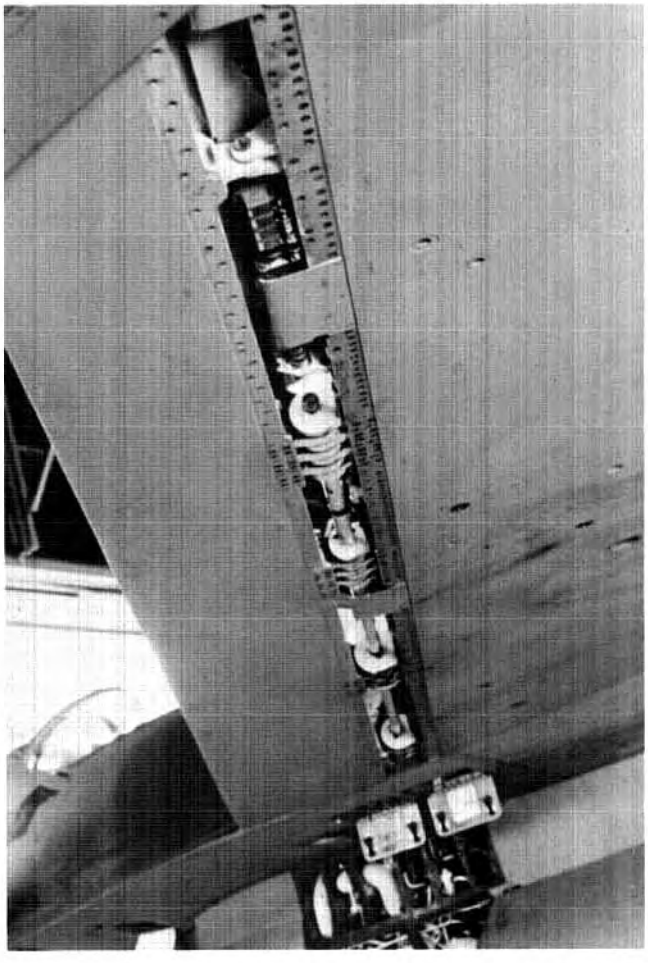
Above right: Open access panels just ahead of the left main landing gear well.

Left: Door 3307 open showing IFF Mode 4 equipment.

Below left and right: Two views of open access panels on the lower left aft fuselage section.







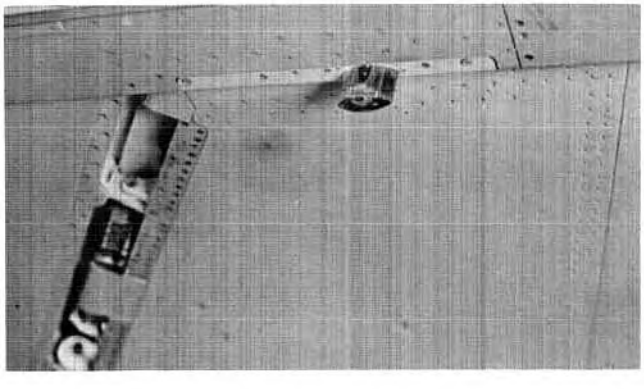
Top left: Panels removed from the top of the right wing just behind the leading edge flap to allow access to the actuating and hinge mechanisms.

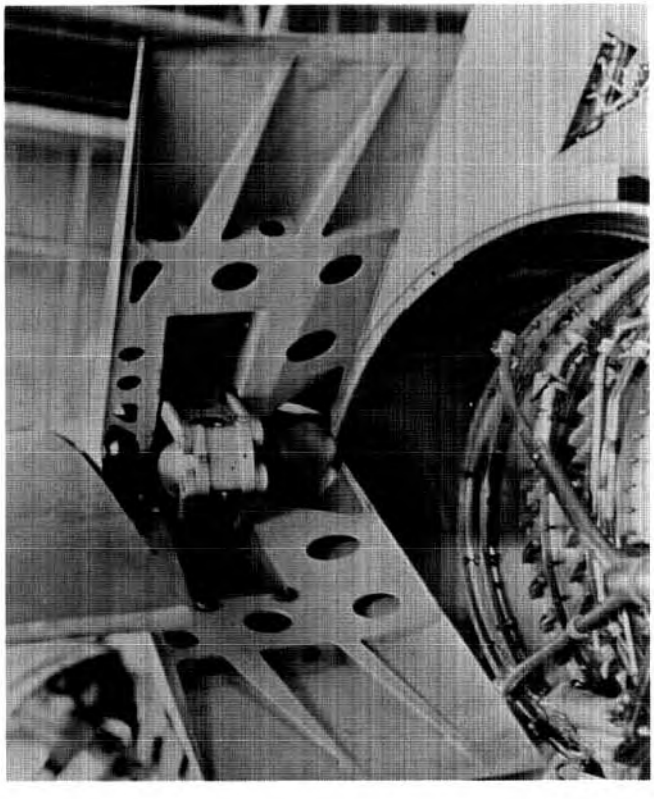
Top right: Similar panels removed from under the left wing.

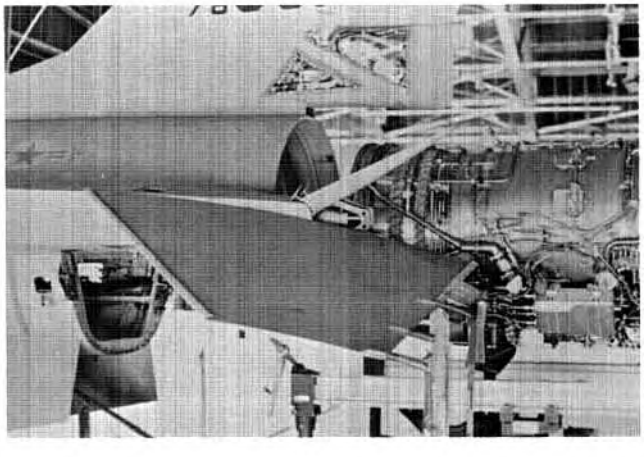
Right: Close-up of small position light on the underside of the left wing. Similar lights are located on the top and bottom of both wing tips.

Below left: Open speed brake detail.

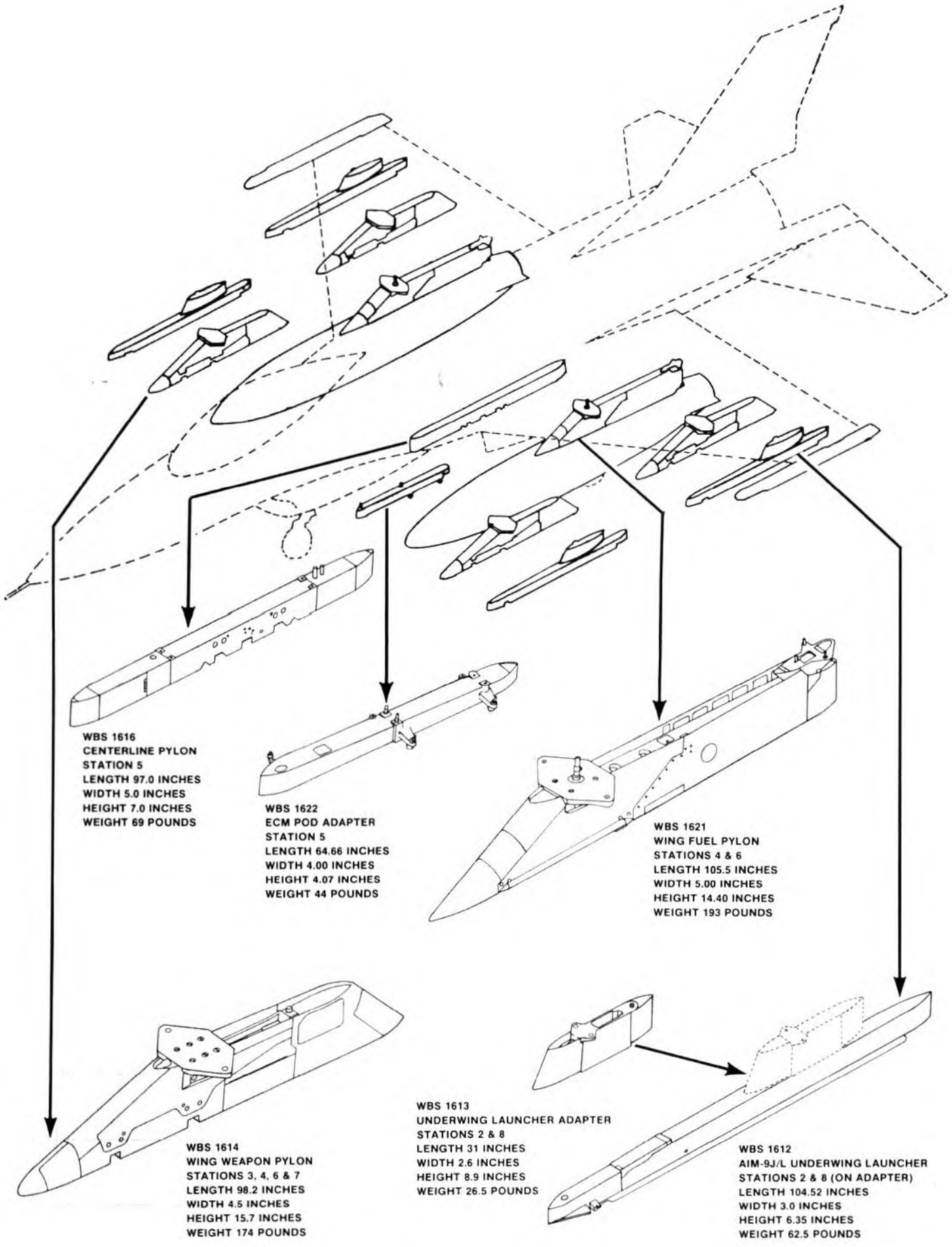
Below right: Open panels on the vertical tall and aft fuselage section. The engine has Just been removed from the aircraft.







PYLONS



WBS 1616
CENTERLINE PYLON
STATION 5
LENGTH 97.0 INCHES
WIDTH 5.0 INCHES
HEIGHT 7.0 INCHES
WEIGHT 69 POUNDS

WBS 1622
ECM POD ADAPTER
STATION 5
LENGTH 64.66 INCHES
WIDTH 4.00 INCHES
HEIGHT 4.07 INCHES
WEIGHT 44 POUNDS

WBS 1621
WING FUEL PYLON
STATIONS 4 & 6
LENGTH 105.5 INCHES
WIDTH 5.00 INCHES
HEIGHT 14.40 INCHES
WEIGHT 193 POUNDS

WBS 1614
WING WEAPON PYLON
STATIONS 3, 4, 6 & 7
LENGTH 98.2 INCHES
WIDTH 4.5 INCHES
HEIGHT 15.7 INCHES
WEIGHT 174 POUNDS

WBS 1613
UNDERWING LAUNCHER ADAPTER
STATIONS 2 & 8
LENGTH 31 INCHES
WIDTH 2.6 INCHES
HEIGHT 8.9 INCHES
WEIGHT 26.5 POUNDS

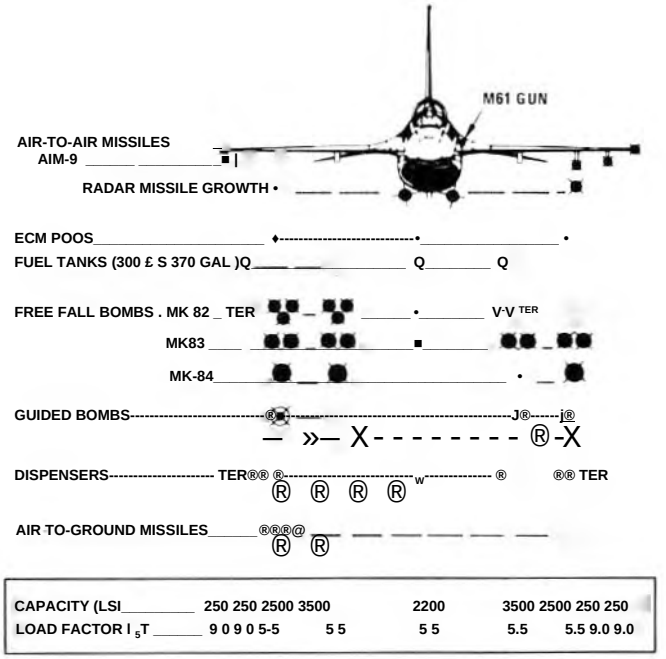
WBS 1612
AIM-9J/L UNDERWING LAUNCHER
STATIONS 2 & 8 (ON ADAPTER)
LENGTH 104.52 INCHES
WIDTH 3.0 INCHES
HEIGHT 6.35 INCHES
WEIGHT 62.5 POUNDS

EXTERNAL STORES

Nine external store stations provide the F-16 with the capacity to carry upto 15,200 pounds of external stores. This puts the aircraft in the same class as the F-4, the A-7, and the A-6. Even with a full internal fuel load, the F-16 can carry 10,500 pounds of external stores that range from fuel tanks to ECM pods and from "dumb" bombs to guided missiles.

Air-to-air fire control is provided by the Westinghouse radar which has both uplook and downlook capabilities. It has a missile mode that provides dynamic missile launch zone calculations, and two air-to-air gunnery modes. One gunnery mode is for a snapshoot situation, and the other utilizes the Lead Computing Optical Sight (LOOS) where smooth angle tracking of the target is possible. A dogfight mode is also selectable which overrides all other modes for close-in combat.

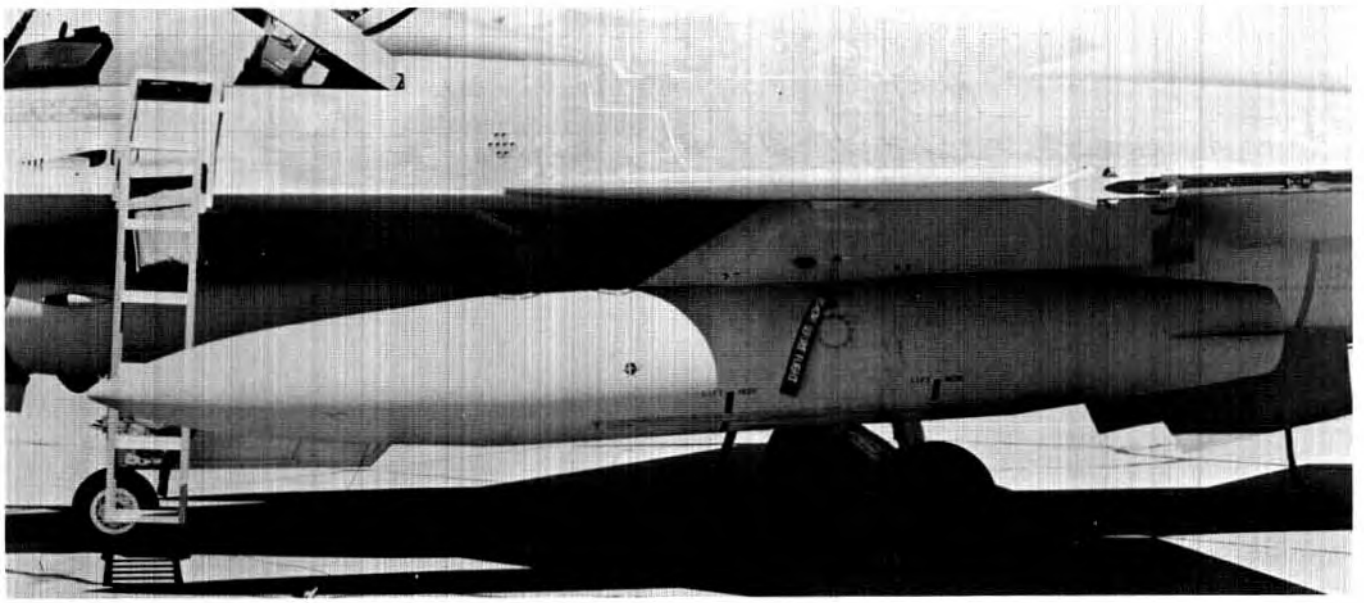
For air-to-ground weapons delivery, a complete set of visual and blind modes are available. Electro-optical (EO) weapons like the Maverick missile can be used, and at night or in adverse weather, accurate weapon delivery can be accomplished using radar direct, radar offset aimpoint, or beacon bombing techniques. Also available is a real beam ground-map mode. These systems on the F-16 have proven to be two to five times more accurate in weapons delivery, depending on the mode used, than what is available in the F-4E.



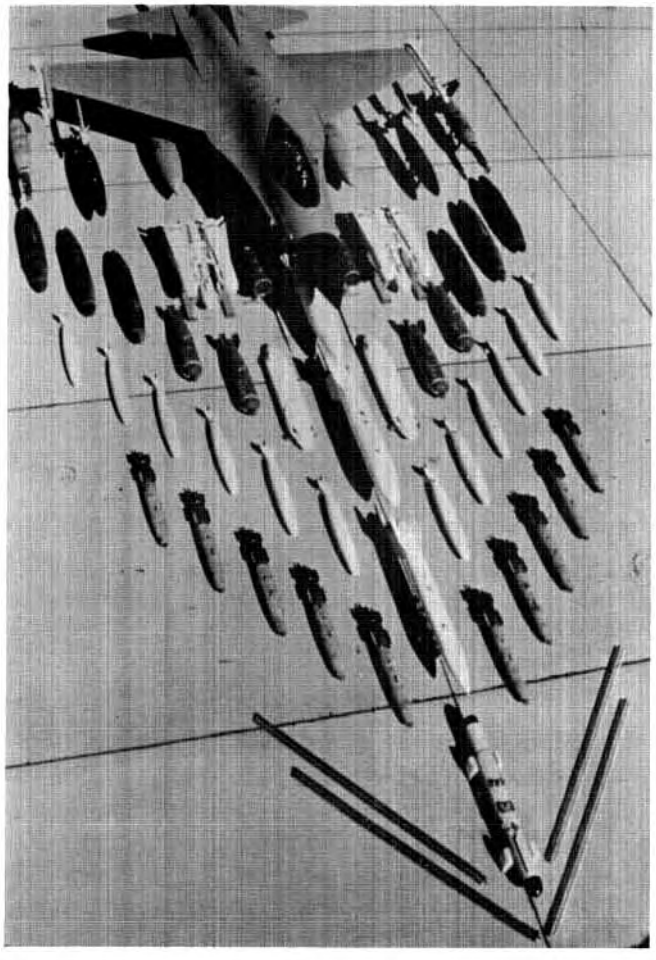
CAPACITY (LSI	250	250	2500	3500		2200		3500	2500 250 250
LOAD FACTOR I $_5$T	9	0	9	0	5-5	5 5	5 5	5.5	5.5 9.0 9.0

HARD POINT CAPACITY = 15,200 LBS

Chart showing some of the external stores combinations that can be carried by the F-16. More weapons will be added to the F-16's arsenal in the future, and hardpoint capacity is being increased. Stations are numbered beginning with the left wingtip station being number 1, and proceeding to the right wingtip station which is number 9. The stations shown in this drawing for radar missile growth are not presently numbered. (General Dynamics)

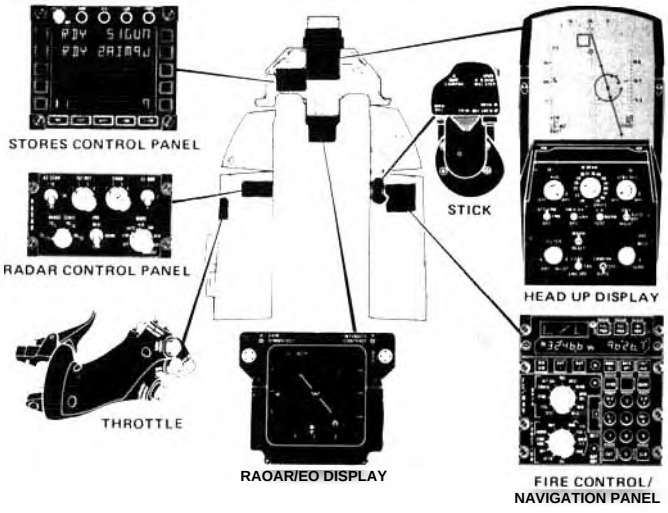


Wing fuel pylon on station number 4 with a 370 gallon fuel tank attached. Note that the tank used on production aircraft is different from the ones used on the prototypes in that it is chopped off at the rear and has smaller fins. Tanks seen on prototypes had a pointed aft section and had three fins including one vertical fin on top. This production tank is 214.3 inches long, 26.5 inches in diameter, and weighs 235 pounds.(Nesset)



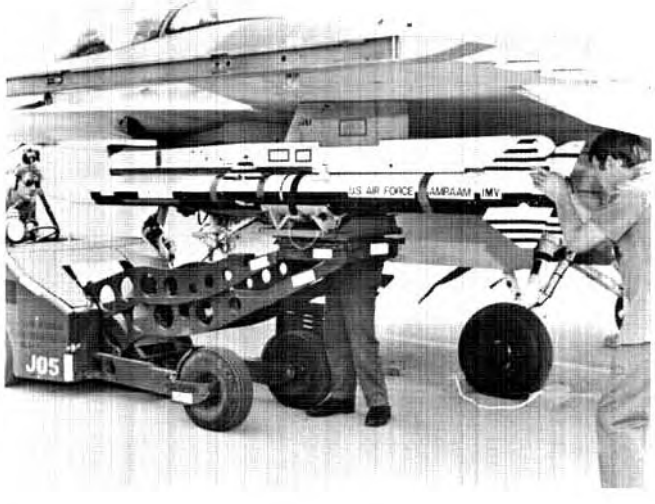
An F-16 displayed with some of the many external stores It can carry. (USAF)

AIR-TO-AIR AND AIR-TO-GROUND
WEAPON DELIVERY CONTROLSAND DISPLAYS

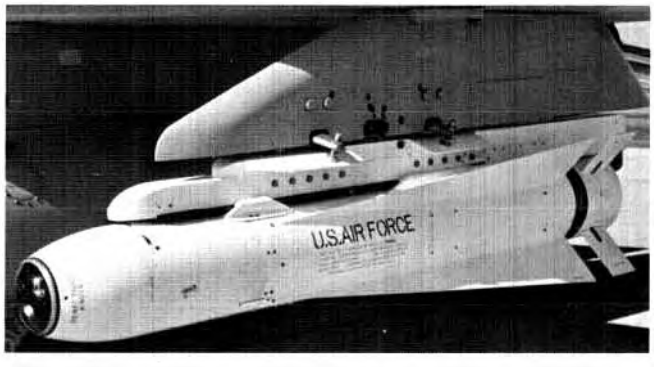


Weapon delivery controls and displays are located in the cockpit to facilitate ease of operation for the pilot. Primary controls are located on the control stick and throttle where the pilot would normally have his hands, and essential data Is displayed on the head up display. (General Dynamics)

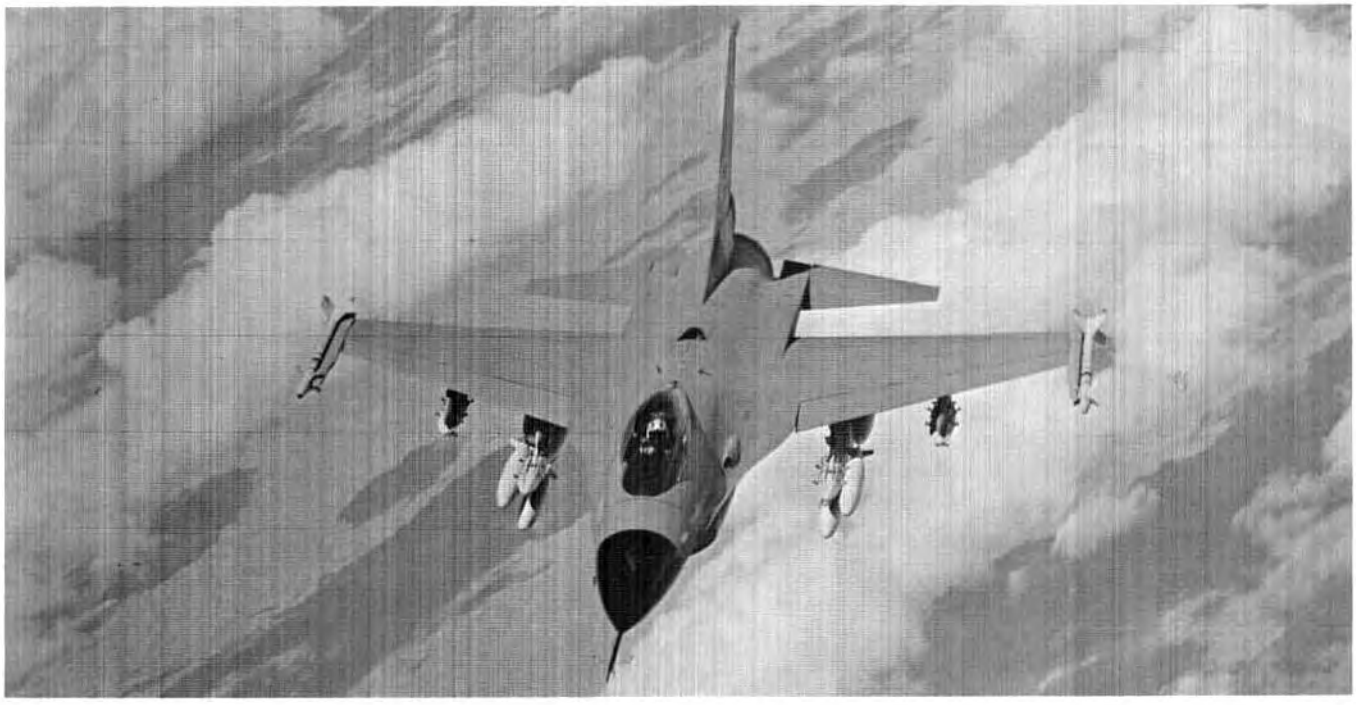
Two AIM-9J Sidewinders on an F-16. Wingtip Sidewinders are standard almost regardless of load, and underwing missiles can be added on stations 2 and 8 utilizing an underwing adapter and launch rail as shown on page 28. (Williams via Lloyd)



Ground crew loading anAMRAAM (AdvancedMedium-Ramp Alr-to-Alr Missile) on an F-16. Hughes Aircraft has been chosen to develop the missile, and the weapon seems likely to be in the Fighting Falcon's future. Firing tests have already been conducted. (General Dynamics)

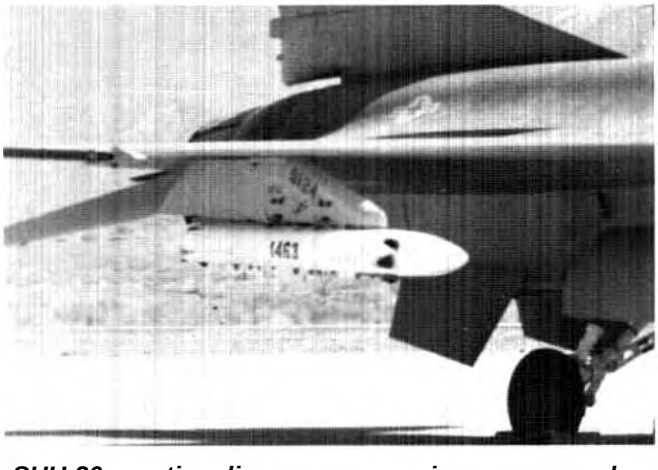


Maverick electro-optical air-to-surface missile on station 3. The pylon Is a WBS 1614 wing weapon pylon. A triple launch rail can be attached to the pylon allowing three missiles to be carried on the pylon instead of just one. (General Dynamics)

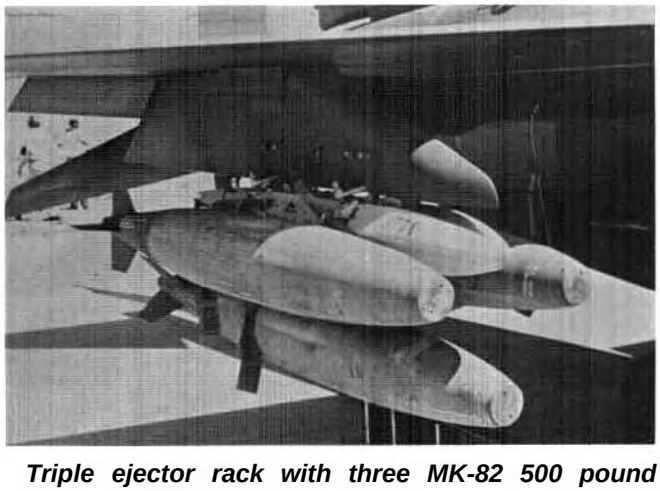


Second FSD aircraft with multiple ejector racks (MERs) on stations 4 and 6, and triple ejector racks (TERs) on stations 3 and 7. These racks combine to allow the F-16 to carry up to eighteen MK-82 500 pound bombs. (General Dynamics)

Another shot of the second FSD aircraft carrying two MK-84 2000 pound bombs on stations 3 and 7, 370 gallon fuel tanks on stations 4 and 6, and an ALO-119 ECM pod on the centerline station, number 5. As usual, AIM-9 Sidewinders are carried on the wingtip stations, numbers 1 and 9. (General Dynamics)

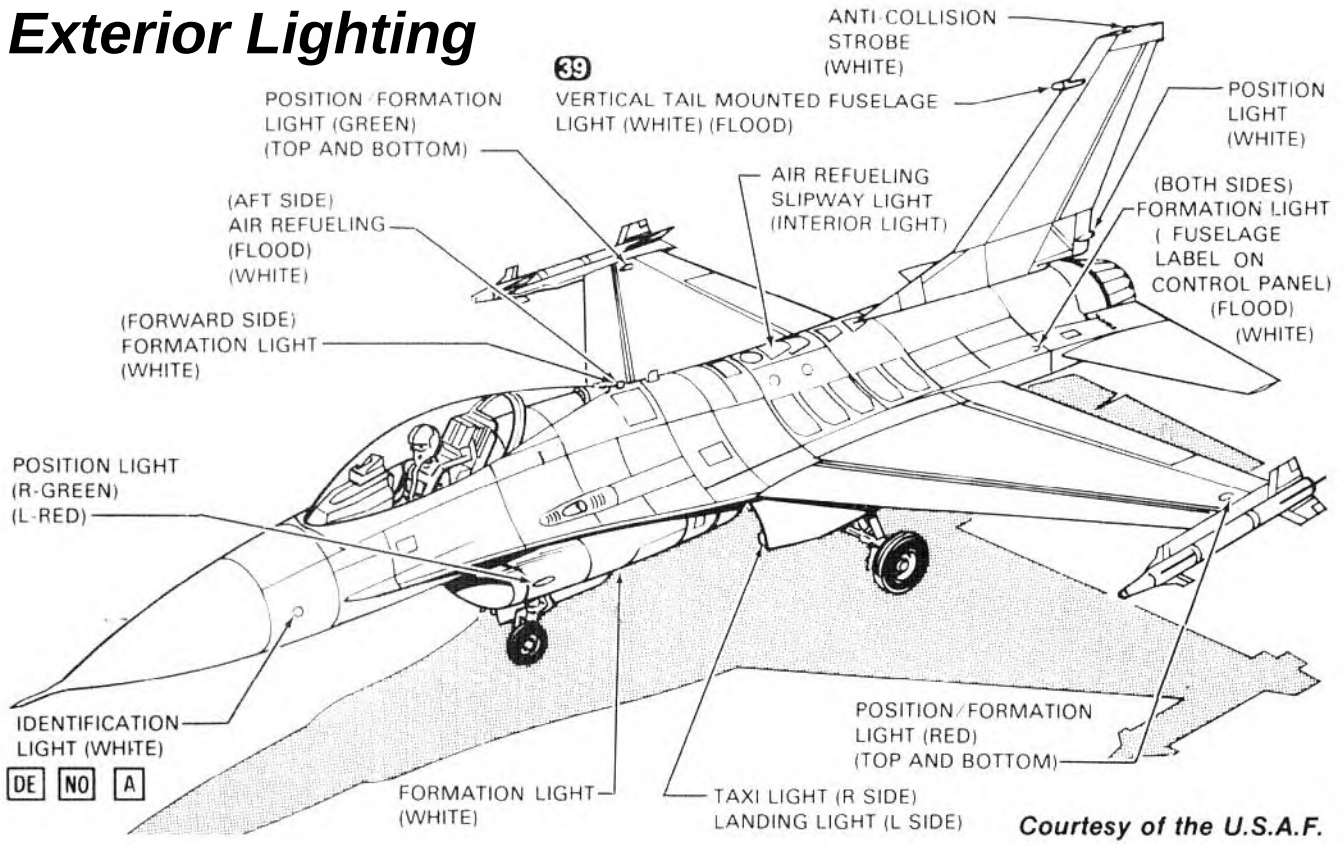


SUU-20 practice dispenser on a wing weapon pylon located on station 7. (General Dynamics)



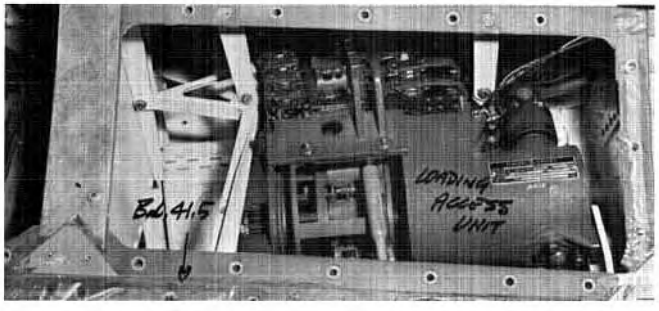
Triple ejector rack with three MK-82 500 pound bombs on station 7. (Slatton)

Exterior Lighting

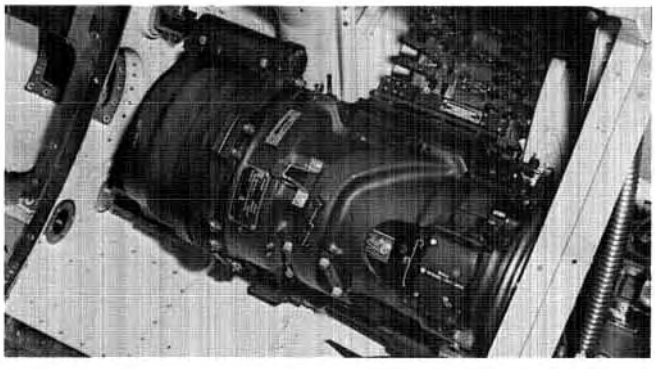

ANTI-COLLISION STROBE (WHITE)
39
VERTICAL TAIL MOUNTED FUSELAGE LIGHT (WHITE) (FLOOD)
POSITION/FORMATION LIGHT (GREEN) (TOP AND BOTTOM)
POSITION LIGHT (WHITE)
AIR REFUELING SLIPWAY LIGHT (INTERIOR LIGHT)
(AFT SIDE) AIR REFUELING (FLOOD) (WHITE)
(BOTH SIDES) FORMATION LIGHT (FUSELAGE LABEL ON CONTROL PANEL) (FLOOD) (WHITE)
(FORWARD SIDE) FORMATION LIGHT (WHITE)
POSITION LIGHT (R-GREEN) (L-RED)
IDENTIFICATION LIGHT (WHITE)
DE NO A
FORMATION LIGHT (WHITE)
TAXI LIGHT (R SIDE) LANDING LIGHT (L SIDE)
POSITION/FORMATION LIGHT (RED) (TOP AND BOTTOM)

Courtesy of the U.S.A.F.

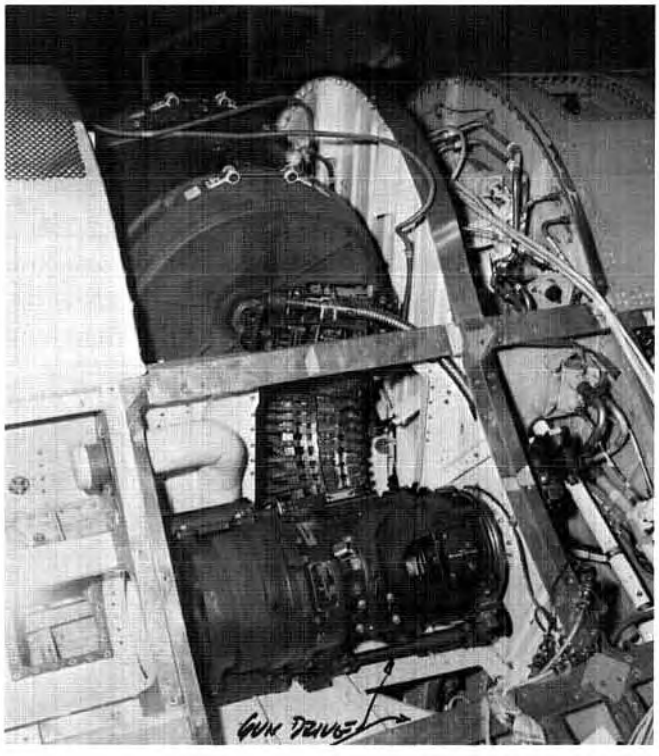
20 MM CANNON DETAILS



View from right side looking down and Inboard showing loading access unit. This Is where ammunition Is fed into the storage drum. Forward is to the right. (General Dynamics)



Close-up of gun drive assembly with the barrels removed. (General Dynamics)



Ammunition storage drum, linkless ammunition feed belt, and gun drive detail as seen from the left side. The barrels have been removed in this photo. (General Dynamics)

F-16 COLORS

The second prototype, 01568, launching an AIM-7 Sparrow from a main gear door pylon during tests to determine the capability of the F-16 to launch the all-weather, radar-guided missile. (General Dynamics)

Same aircraft as in top photo, 01568, shown in a different paint scheme during aerial refueling exercises. (General Dynamics)

AFTI/F-16 aircraft. This aircraft Is being fitted with the same canards that were used on the CCV aircraft as shown on page 56. (General Dynamics)

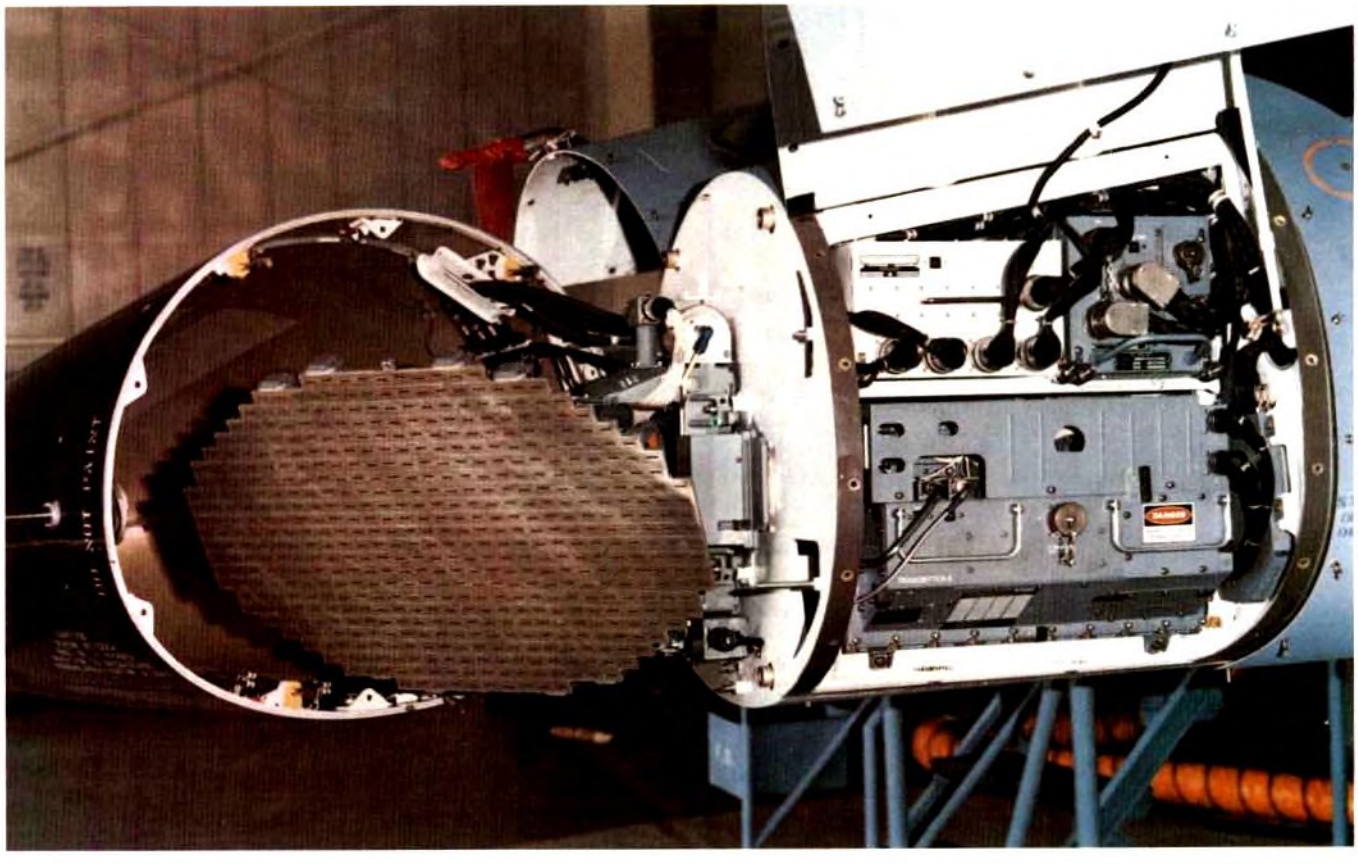
EJECTION SEAT

The red SIHS seat as used in the prototype and FSD aircraft. (Stencel Aero)

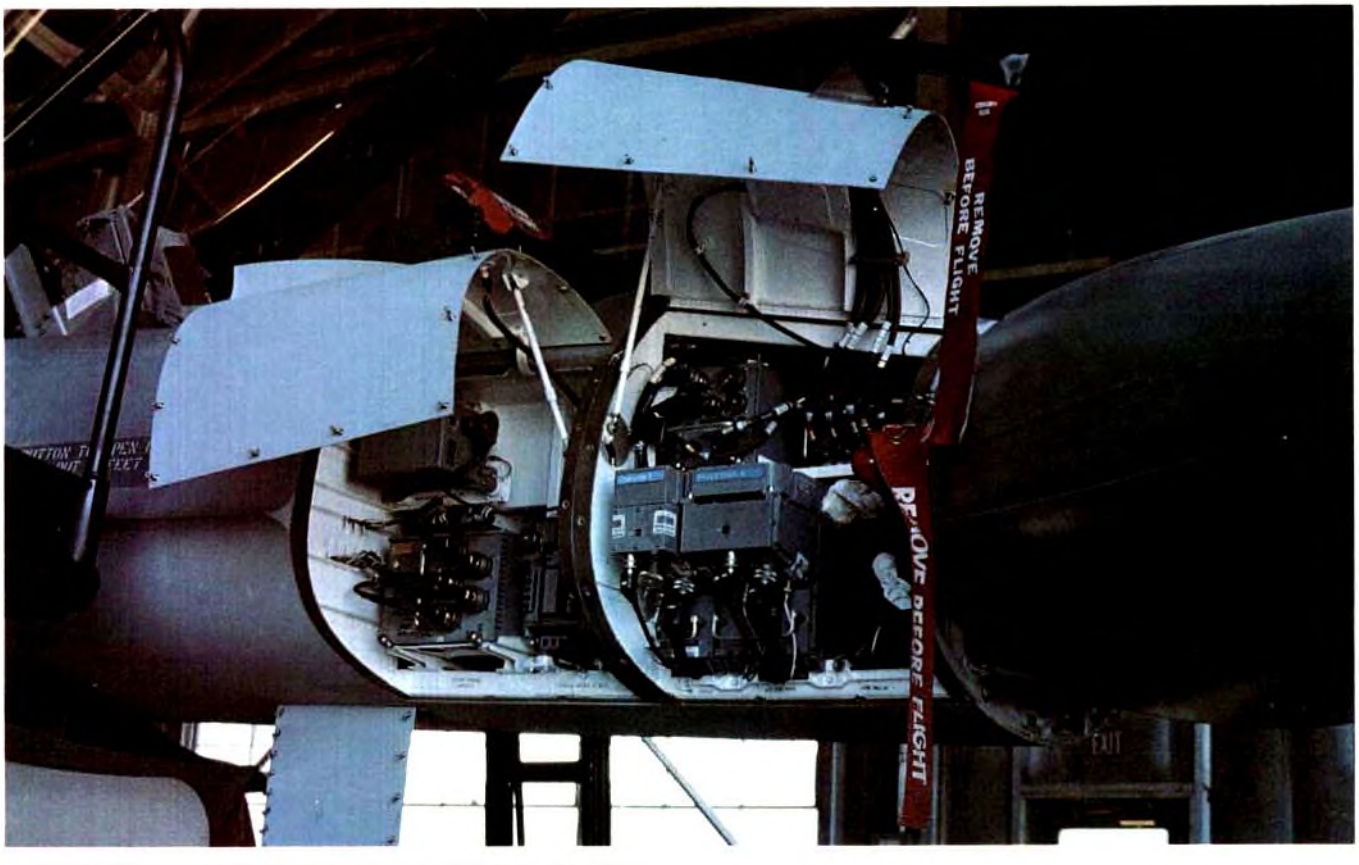
The ACES II ejection seat used in production F-16s. (General Dynamics)

Front and rear views of the ACES II seat. The front view shows red head rests, but compare this to the photo at the bottom left of page 36 where the rests are gray as they appear in production aircraft. (General Dynamics)

WESTINGHOUSE RADAR



Radar antenna with left side equipment bay open. *(General Dynamics)*

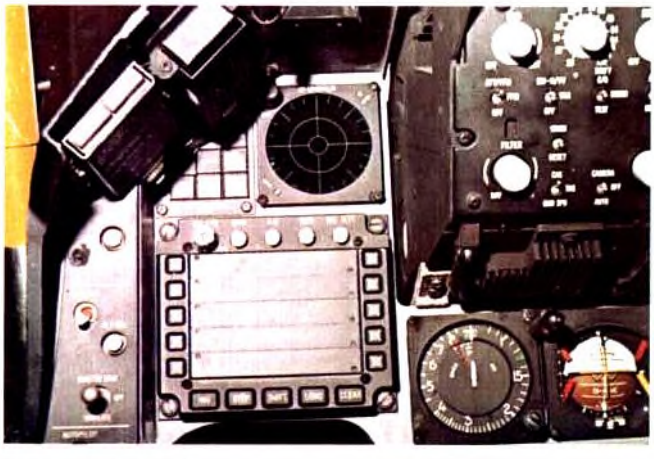


Right side bays just behind open radome on F-16A.

F-16A COCKPIT DETAIL

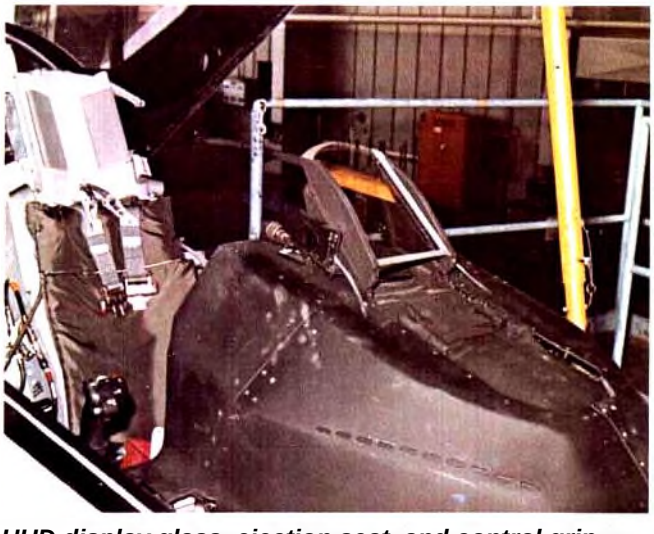
General view of F-16A cockpit. See pages 18 and 19 for layout and callouts designating the various switches, instruments, panels, and indicators of the cockpit.

Center console containing the radar/EO display, horizontal situation indicator (HSI), angle of attack indicator, rudder pedal adjust knob, and instrument mode select panel.

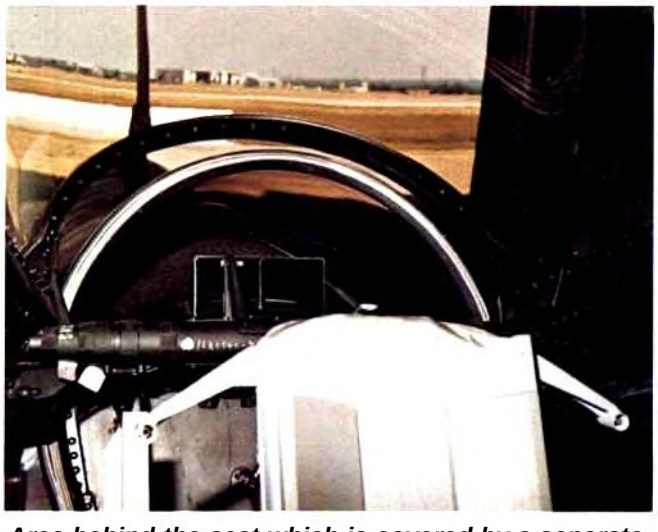


Left side of main instrument panel with the stores control panel at bottom, the threat warning azimuth indicator, and threat warning controls.

Right side of instrument panel containing engine and flight instruments.

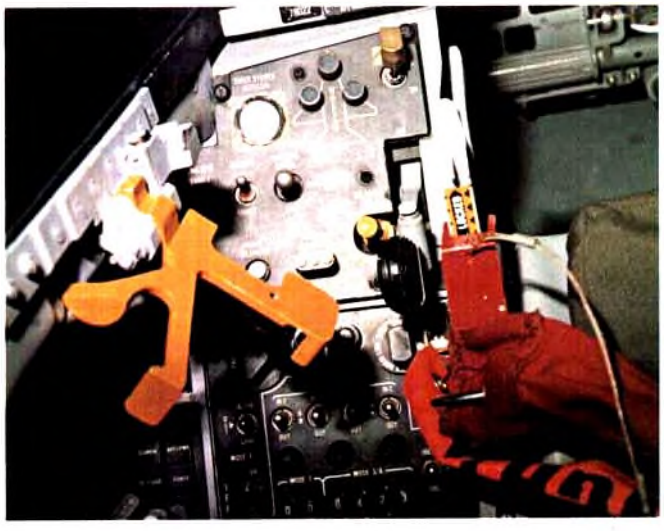


HUD display glass, ejection seat, and control grip.



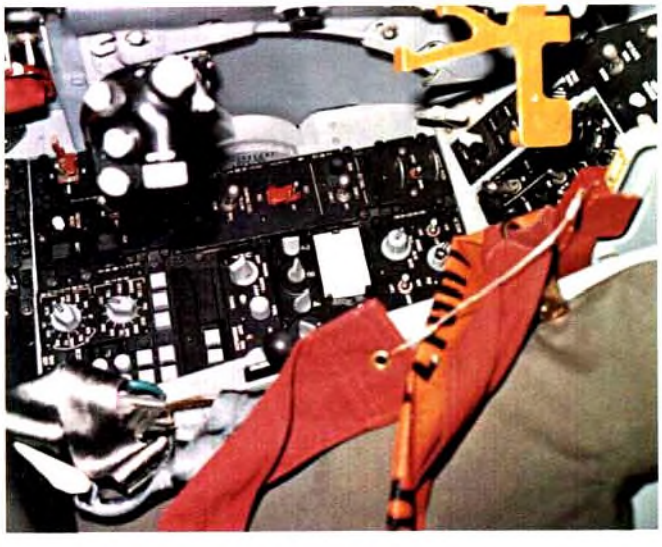
Area behind the seat which is covered by a separate piece of glass giving excellent rearward visibility,

All photos on these two pages are courtesy of General Dynamics.



Left auxiliary panel.

Right auxiliary panel.



Forward portion of left console.

Forward portion of right console. Note the armrest.

Rear portion of left console.

Aft portion of right console.

388th TFW CO's AIRCRAFT

F-16A, 79-0290, 4th TFS, 388th TFW commander's aircraft as used in the naming ceremony.
(Knowles via Rotramel)

Close-up of the markings on the left side of 79-0290 showing the naming ceremony insignia and the 4th TFS badge. Note Col. Troy Tolbert's name on the intake just above the light.

F-16A, 78-0012, 16th TFTS, 388th TFW, commander's aircraft, September, 1980. (Rotramel)

F-16A, 79-0318, 421st TFS, 388th TFW. commander's aircraft, March, 1981. (Rotramel)

F-16A, 79-0320, 34th TFS. 388th TFW. commander s' aircraft. April. 1981. (Rotramel)

F-16B, 78-0115, 34th TFS. 388th TFW. DCM's aircraft. November, 1980. (Rotramel)

FOREIGN F-16s

From the beginning, the F-16 has been a multi-national fighter, and the prototypes and first FSD aircraft have carried the flags of some of the foreign nations from time-to-time.

Israeli F-16B in standard camouflage.

Norwegian F-16B just prior to landing.

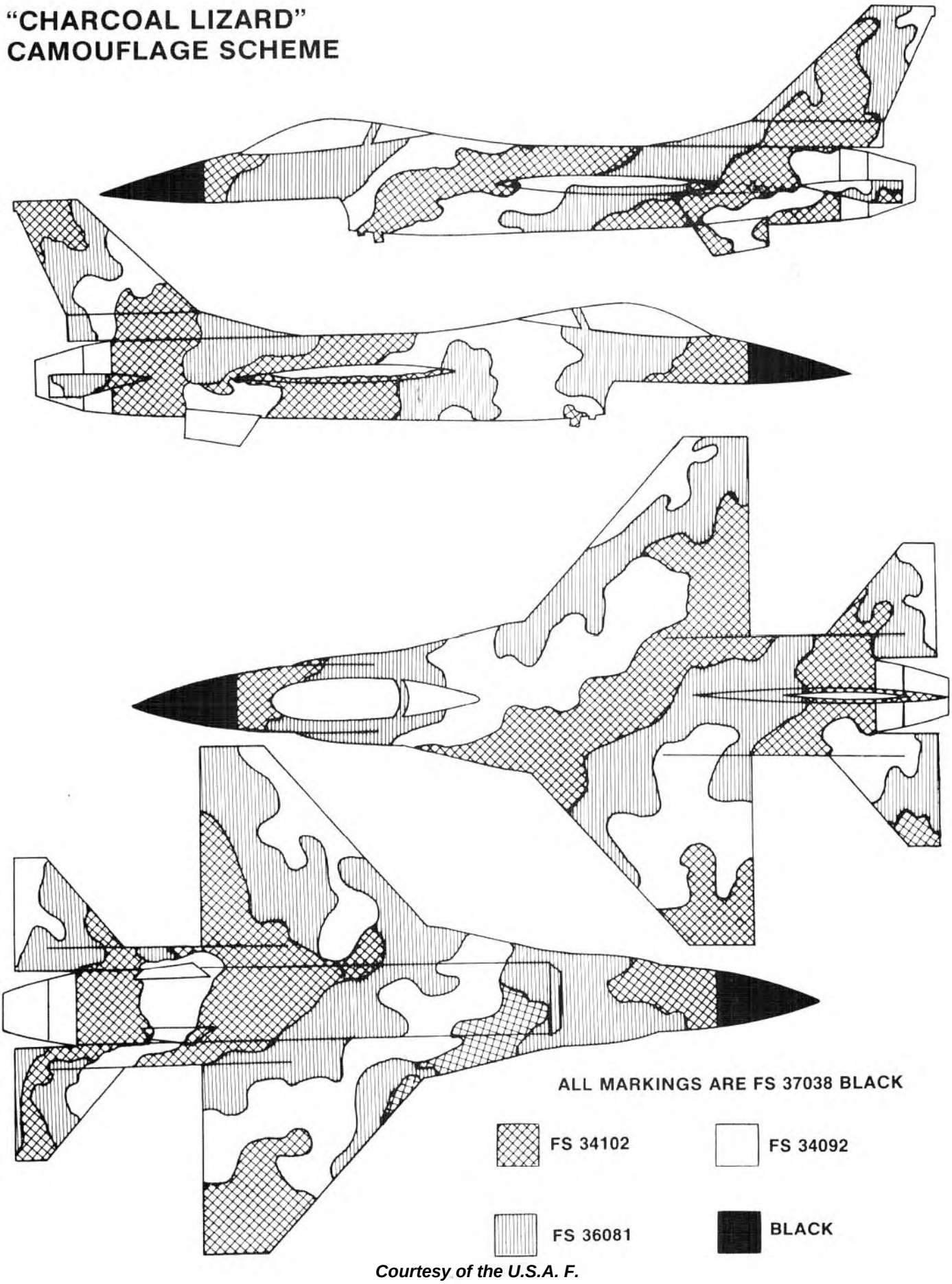
The first F-16B for The Netherlands.

Danish F-16B. F-16s for Denmark and The Netherlands have the same camouflage scheme as U.S. F-16s.
(All photos this page are courtesy of General Dynamics)

CHARCOAL LIZARDS

One F-16A and one F-16B received an experimental green camouflage scheme which was called, "charcoal lizard" and “pickle". This scheme proved unpopular with pilots, and could not be distinguished from the gray scheme at distances In excess of3000 feet. F-16A 78-0008, was the single seat F-16 to receive this scheme, and like the F-16B shown below, was from the 34th TFS. 388th TFW. (Rogers via Knowles and Rotramel)

Leftside (above) and right side (below) of F-16B, 78-096, In the green camouflage scheme. Since this scheme proved so unpopular it has been dropped. (Rotramel)



Courtesy of the U.S.A. F.

F-16A, 78-0012, of the first production block. F-16As of block 1 have serial numbers 78-0001 thru 78-0021, and originally had black radomes. However they are being replaced with the gray ones common to all subsequent aircraft. - *(Nesset)*

F-16A, 80-548, of the 80th TFS, 8th TFW, enroute to Its home base at Kunsan AFB, Korea. Photo taken January 17, 1982 at Anderson AFB, Guam. *(Nelson)*

F-16A, 78-075, poses with an AWACS aircraft. Note the travel pod on the centerline station of the F-16.
(Boeing via Lloyd)

DIMENSIONS

DIMENSION	ACTUAL	1/72nd SCALE	1/48th SCALE	1/32nd SCALE
Wingspan:				
W/O Missile Rails	30' 0"	5.00"	7.50"	11.25"
W/O Missiles	31' 0"	5.17"	7.75"	11.63"
With Missiles	32' 10"	5.47"	8.21"	12.31"
Wheel Tread	7' 9"	1.29"	1.94"	2.91"
Length (W/O Pitot)	47' 7.6"	7.94"	11.91"	17.86"
Height	16' 5.2"	2.74"	4.11"	6.16"
Horizontal Tail Span	18' 0.34"	3.00"	4.51"	6.76"

TECHNICAL DATA

WEIGHTS:

F-16A

Weight Empty..... 14,567 lbs.
Internal Fuel.....?..... 6,972 lbs.

F-16B

Weight Empty..... 15,141lbs.
Internal Fuel.....5,785lbs.

Takeoff Weight (Air-to-Air Without Tanks)

F-16A..... 22,785lbs.
F-16B..... 22,160lbs.

Maximum Takeoff Weight..... 33,000lbs.

General Data

WING
- Area.....300 Sq. Ft.
- Span..... ..30 Fl. 0 In.
- Aspect Rotio 3.0
- Toper Ratio..... ..0.2275
- Sweep (L.E.).....40°
- Dihedral..... ..0°
- Airfoil..... ..NACA 64A204
- Incidence.....0°
- Twist
  - Al S.S 54 0..... ..0°
  - Al S.S 180.0..... ..3°
- Flaperon Area.....31.32 Sq. Fl
- L.E. Flap Area.....36.71 Sq. Fl

HORIZONTAL TAIL (MOVABLE)
- Area..... ..49.0 Sq. Fl.
- Aspect Ratio.....2 598
- Toper Ratio..... ..0.3
- Sweep (L.E.)..... .40°
- Dihedral..... ...10°
- Airfoil
  - At Root..... .. 6% Biconvex
  - At Tip..... ... 3.5 Biconvex

VERTICAL TAIL
- Areo..... ...54.75 Sq. Fl.
- Aspect Ratio..... ...1.294
- Taper Ratio..... ...0.437
- Sweep (L.E.)..... . 47.5°
- Airfoil
  - At Root..... . ..5.3% Biconvex
  - At Tip..... . ..3.0% Biconvex
- Rudder Area..... ...1 1.65 Sq. Ft.

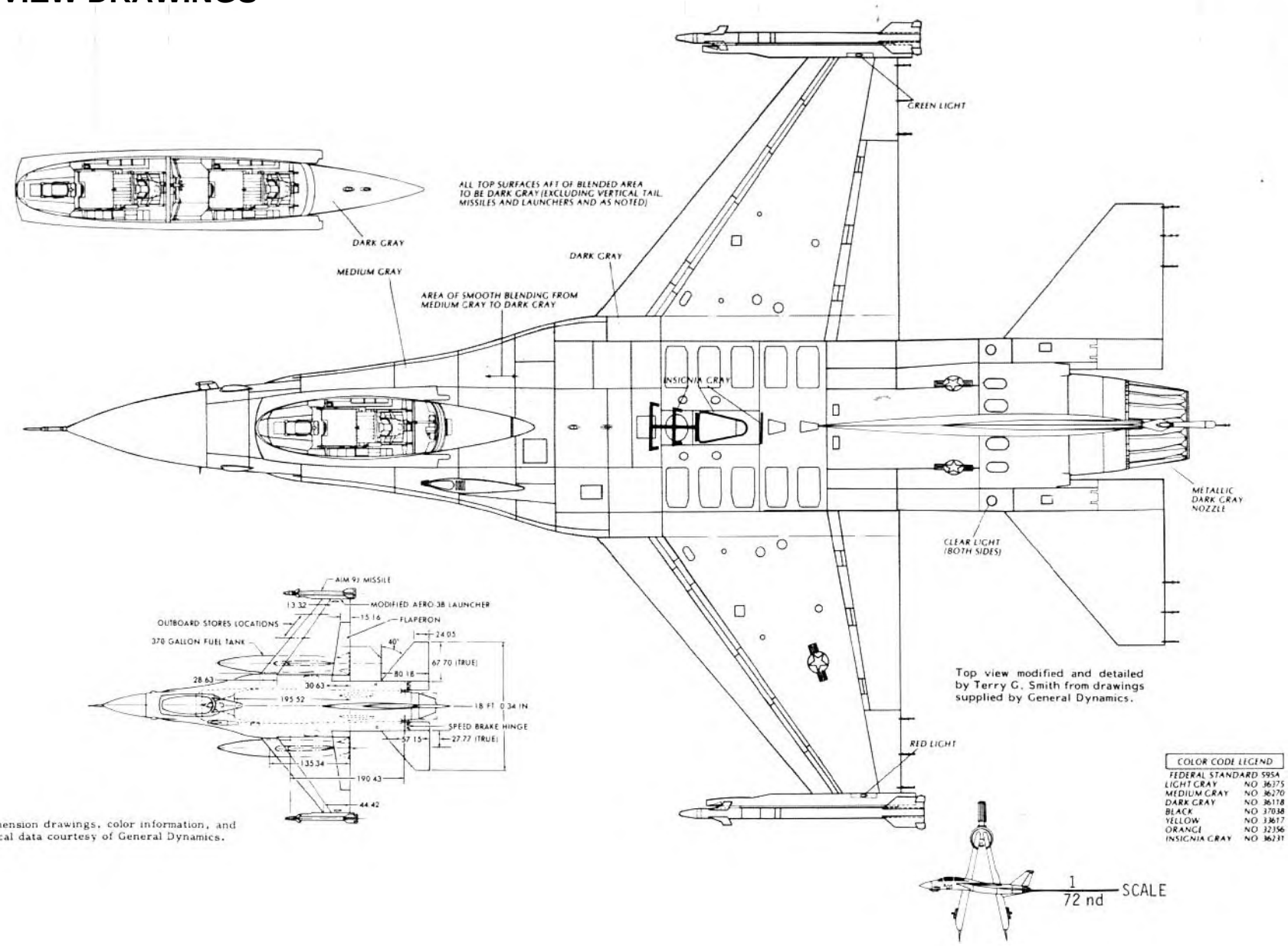
VENTRAL FIN (EACH)
- Area... .....8.03 Sq. Fl
- Span..... ..23.356 In. Theo. (27.5 In. Actual)
- Aspect Ratio..... ..0.472 (Theo.)
- Taper Ratio..... .0.760 Hheo 1
- Sweep (L.E.)..... .30°
- Dihedral {Cant)... .....15° Outbd
- Airfoil
  - Al Root .....3.886 % Modified Wedge
  - Al Tip...Constant 0.03R.....

SPEED BRAKE
- Area (4 Element Clamshell). ..14.26 Sq. Ft. (3.565 Sq. Fl. Ea.)

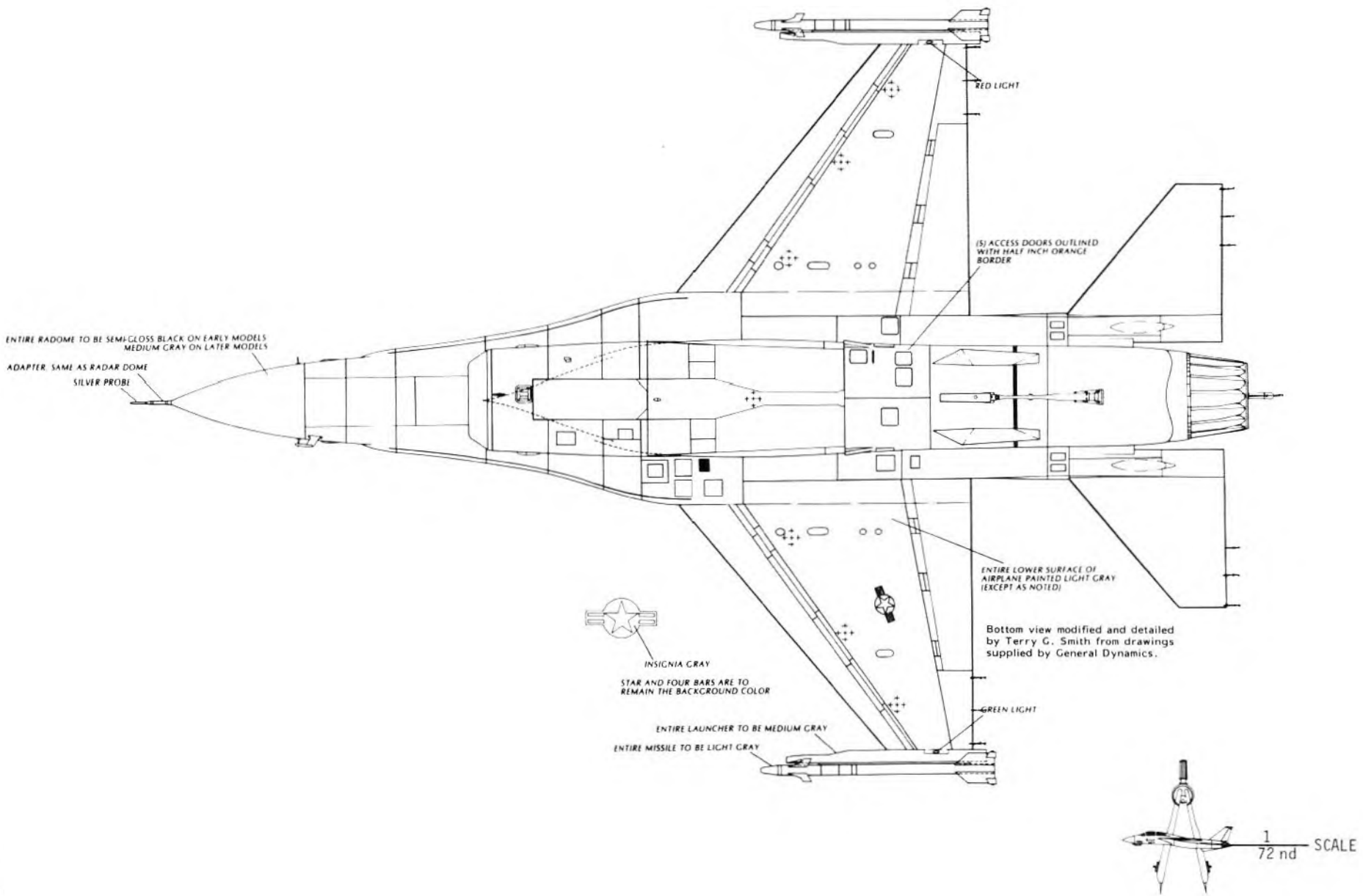
LANDING GEAR
- Main Gear
  - Tire Size..... ..25 5 x 814
  - Stroke..... ..10.5 In.
  - Sialic Rolling Radius..... ..1 1.0 In.
- Nose Gear
  - Tire Size..... ..18 x 5.5-8
  - Stroke..... .. 1 0.0 In.
  - Sialic Rolling Radius...7.5 In.
- Propulsion
  - Engine..... ..FI00-PW 1 00(3)
  - Thrust.....25 000 Lb Class
  - Engine Compressor Face Dia .....34.8 In
  - Engine Length..... ..191.16 In

F-16A & B FIGHTING FALCON
1/72nd SCALE
FIVE-VIEW DRAWINGS

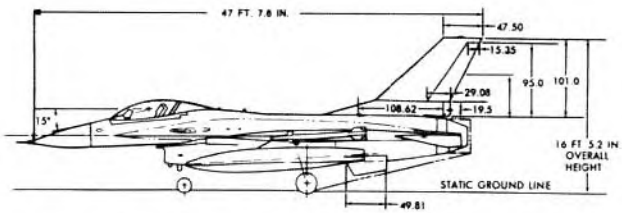
Five-view drawings of the F-16 and many other aircraft are available separately in 1/48th scale at a nominal price. Write to Aero Publishers, Inc. 329 West Aviation Road, Fallbrook, California 92028 for details.

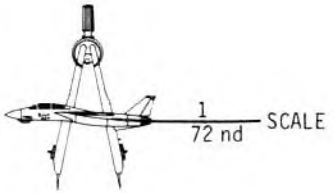

DARK GRAY
ALL TOP SURFACES AFT OF BLENDED AREA TO BE DARK GRAY (EXCLUDING VERTICAL TAIL, MISSILES AND LAUNCHERS AND AS NOTED)
GREEN LIGHT
DARK GRAY
MEDIUM GRAY
AREA OF SMOOTH BLENDING FROM MEDIUM GRAY TO DARK GRAY
INSIGNIA GRAY
METALLIC DARK GRAY NOZZLE
CLEAR LIGHT (BOTH SIDES)
RED LIGHT
AIM 9J MISSILE
MODIFIED AERO 3B LAUNCHER
FLAPERON
OUTBOARD STORES LOCATIONS
370 GALLON FUEL TANK
67.70 (TRUE)
SPEED BRAKE HINGE
27.77 (TRUE)
18 FT 0.34 IN
190.43
44.42
Top view modified and detailed by Terry G. Smith from drawings supplied by General Dynamics.
COLOR CODE LEGEND
FEDERAL STANDARD 595A
LIGHT GRAY NO 36375
MEDIUM GRAY NO 36270
DARK GRAY NO 36118
BLACK NO 37038
YELLOW NO 33617
ORANGE NO 32356
INSIGNIA GRAY NO 36231
1/72 nd SCALE

All dimension drawings, color information, and technical data courtesy of General Dynamics.

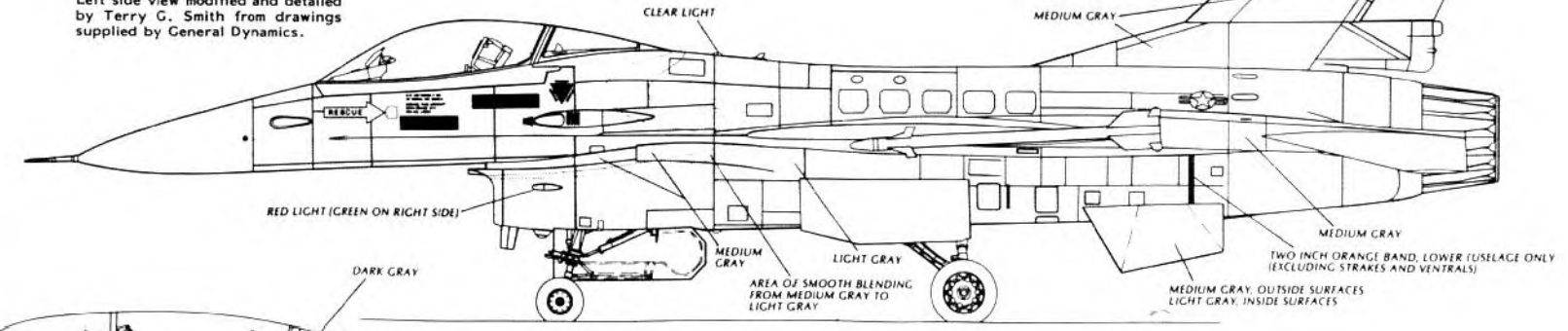

RED LIGHT
(5) ACCESS DOORS OUTLINED WITH HALF INCH ORANGE BORDER
ENTIRE RADOME TO BE SEMI-GLOSS BLACK ON EARLY MODELS
MEDIUM GRAY ON LATER MODELS
ADAPTER, SAME AS RADAR DOME
SILVER PROBE
ENTIRE LOWER SURFACE OF AIRPLANE PAINTED LIGHT GRAY (EXCEPT AS NOTED)
Bottom view modified and detailed by Terry G. Smith from drawings supplied by General Dynamics.
INSIGNIA GRAY
STAR AND FOUR BARS ARE TO REMAIN THE BACKGROUND COLOR
GREEN LIGHT
ENTIRE LAUNCHER TO BE MEDIUM GRAY
ENTIRE MISSILE TO BE LIGHT GRAY
1
72 nd
SCALE

cn



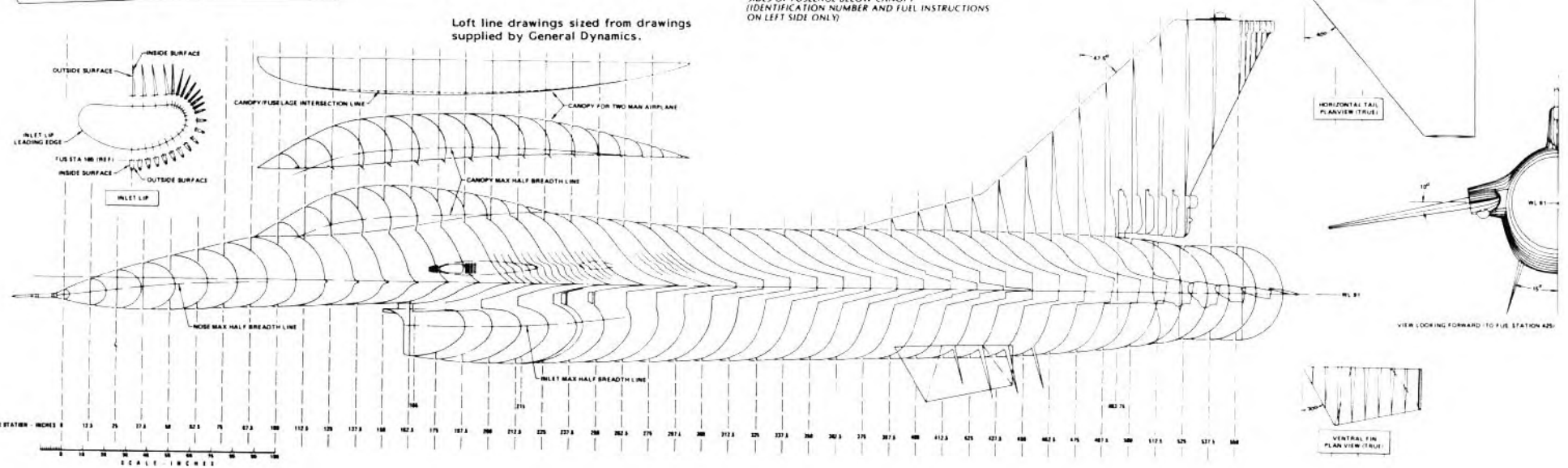


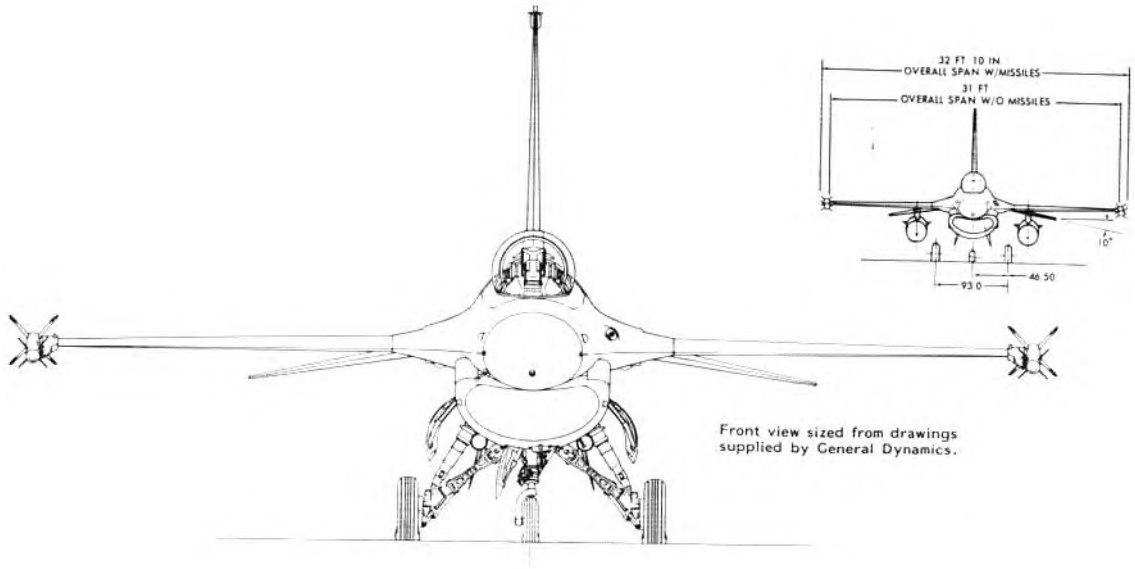
Left side view modified and detailed by Terry G. Smith from drawings supplied by General Dynamics.


CLEAR LIGHT
MEDIUM GRAY
RESCUE
RED LIGHT (GREEN ON RIGHT SIDE)
MEDIUM GRAY
LIGHT GRAY
AREA OF SMOOTH BLENDING FROM MEDIUM GRAY TO LIGHT GRAY
MEDIUM GRAY
TWO INCH ORANGE BAND, LOWER FUSELAGE ONLY (EXCLUDING STRAKES AND VENTRALS)
MEDIUM GRAY, OUTSIDE SURFACES
LIGHT GRAY, INSIDE SURFACES
DARK GRAY

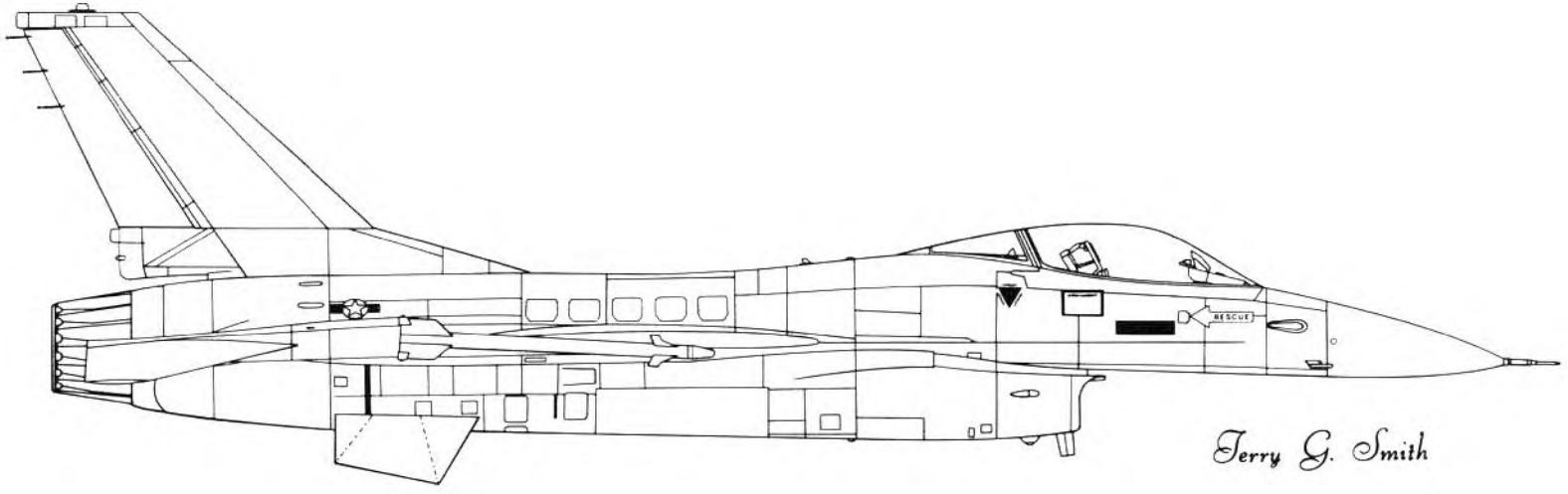
MARKINGS ON BOTH LEFT AND RIGHT HAND SIDES OF FUSELAGE BELOW CANOPY (IDENTIFICATION NUMBER AND FUEL INSTRUCTIONS ON LEFT SIDE ONLY)

Loft line drawings sized from drawings supplied by General Dynamics.


INSIDE SURFACE
OUTSIDE SURFACE
INLET LIP LEADING EDGE
INLET LIP
CANOPY/FUSELAGE INTERSECTION LINE
CANOPY FOR TWO MAN AIRPLANE
CANOPY MAX HALF BREADTH LINE
NOSE MAX HALF BREADTH LINE
INLET MAX HALF BREADTH LINE
HORIZONTAL TAIL PLANVIEW (TRUE)
VIEW LOOKING FORWARD TO FUS. STATION 429
VENTRAL FIN PLAN VIEW (TRUE)
SCALE - INCHES



Front view sized from drawings supplied by General Dynamics.



Terry G. Smith

1/72 nd SCALE

F-16B from front. Note how high the canopy extends when open. ***(Lloyd)***

THE F-16B

F-16B, 78-0101, of Detachment 16, 57th TWW. Nellis AFB, which was responsible for the Multi-national Operational Test and Evaluation (MOT&E) program for the F-16. Although this photo was taken at Neills, Detachment 16 spent a lot of time at Hill AFB. and wore the "HL" tall code while there.

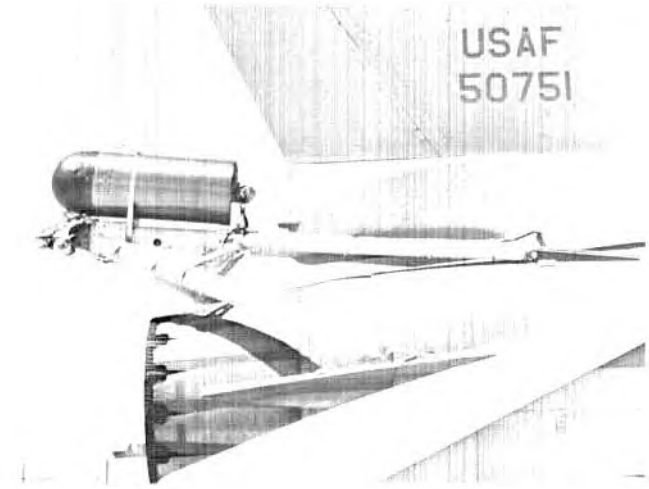
The F-16B two seat "family model" is identical in size to the F-16A. and is externally distinguishable from the single seat version by its extended canopy. Room for the rear cockpit was made by reducing the internal fuel capacity by 1,100 poundsand reducing some of the avionics growth space.

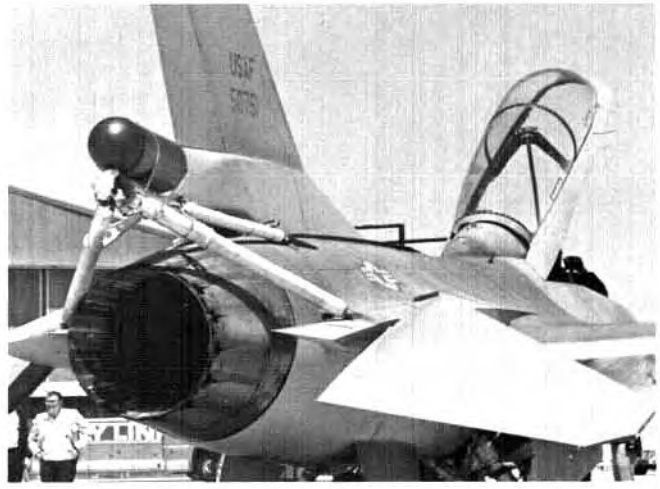
Although pilot training is an important function of the F-16B. it is a full combat capable aircraft, and is therefore designated F-16B as opposed to TF-16. The first flight of an F-16B was made on August 8. 1977, and since then a requirement for 204 F-16Bs has been announced by the U.S. Air Force, and an additional 90 are slated foi the Multi-national European air forces.

F-16Bs have been used for extensive testing and evaluation. Examples of thisarethespin test aircraft shown on the next page, the "Wild Weasel" proposal shown on page 57, and the J79 engine tests covered on pages 60 and 61.

F-16B, 50751, used in spin tests as photographed at Edwards AFB. California in April, 1981.

(Williams via Lloyd)



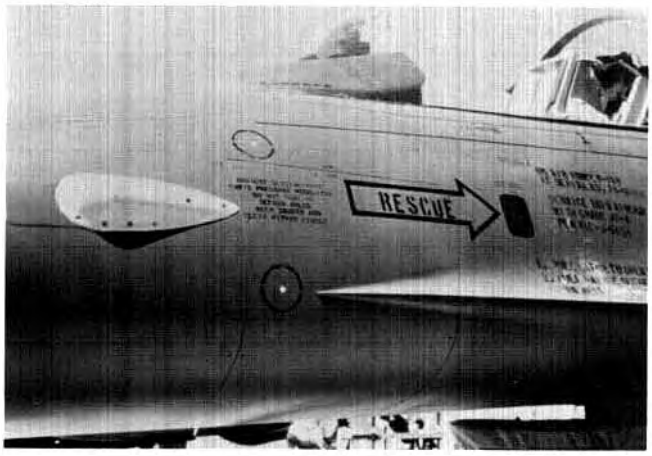


Two views of the spin recovery parachute attachment on F-16B. 50751. *(Williams via Lloyd)*

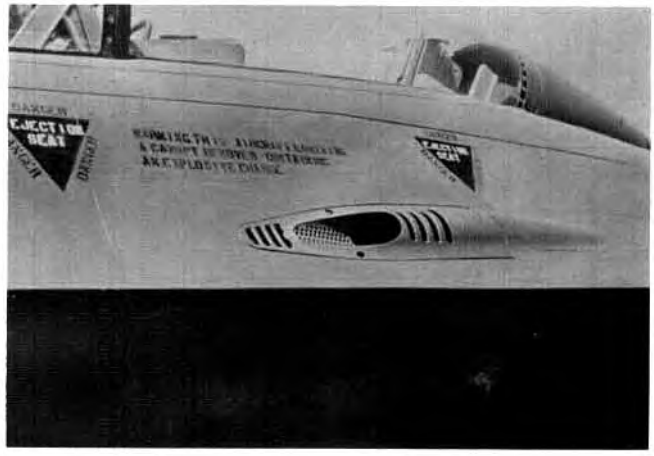
F-16B, 78-114, of the 56th TFW, Mac Dill AFB, Florida. *(Lloyd)*

Rear view of an F-16B. Note the different angles of the horizontal stabilizers. *(Nesset)*

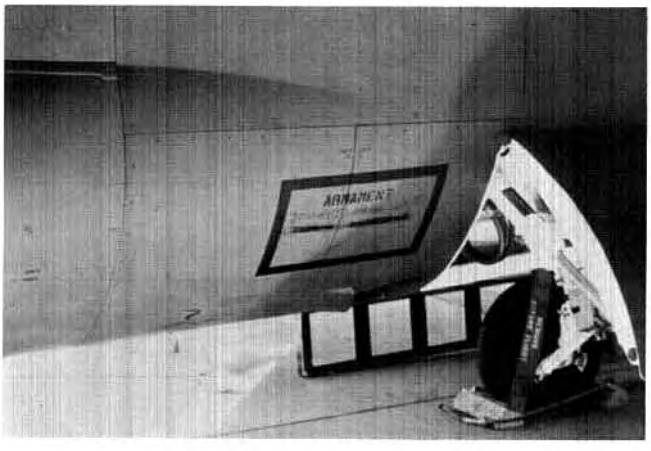
F-16B WALK-AROUND



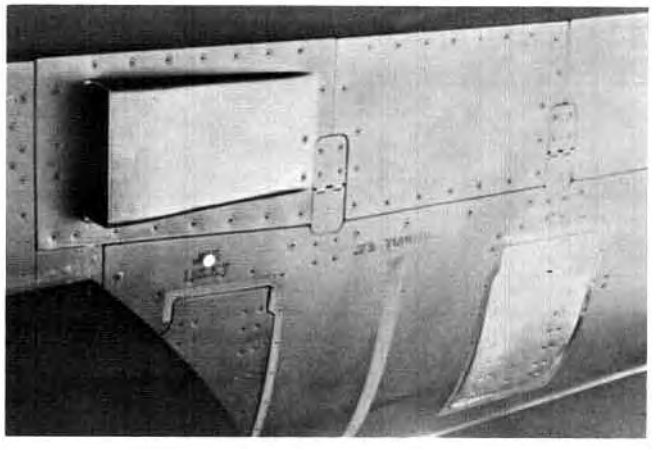
Left side of nose showing RHAW antenna and forward portion of canopy.



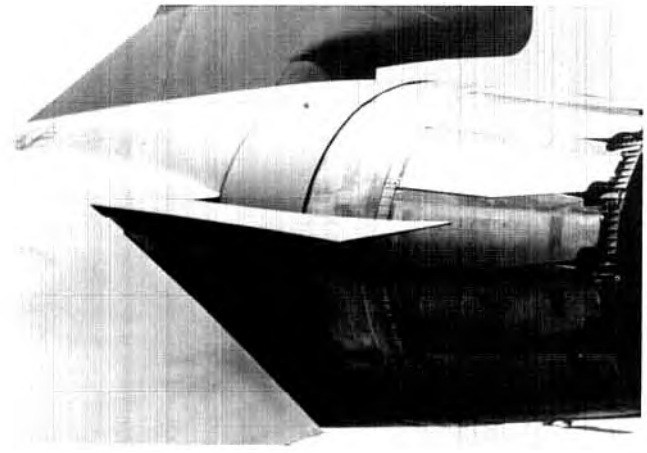
Cannon fairing detail.



Location of the armament rectangle on the F-16.



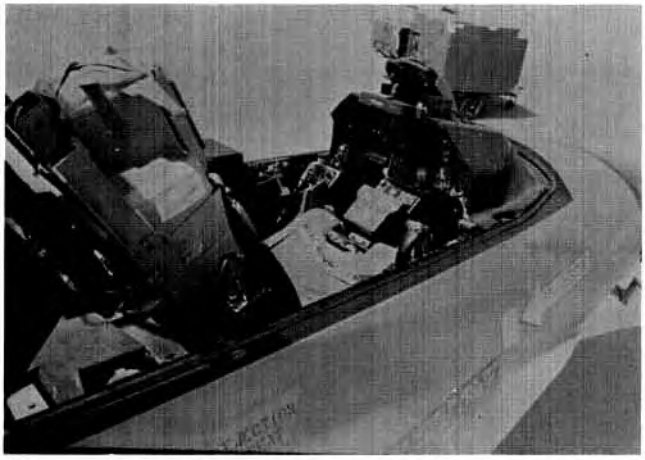
Small air scoop located just behind the left main landing gear well. A similar scoop Is located on the opposite side. Also note that the exhaust panel Is natural metal.



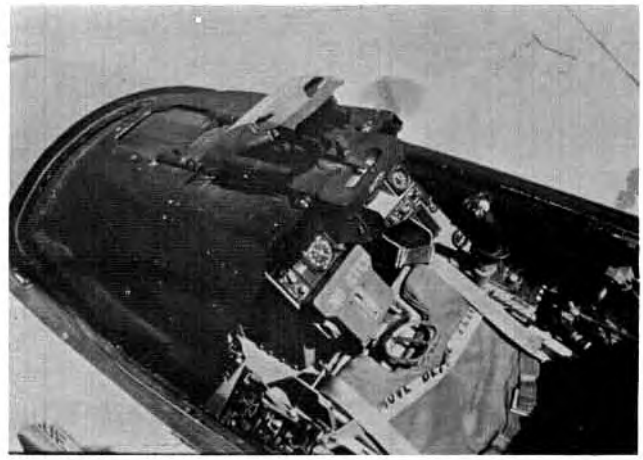
Exhaust nozzle detail, and speed brake In the closed position.

Right side of nose showing Intake cover and lightning arrestors on the radome.

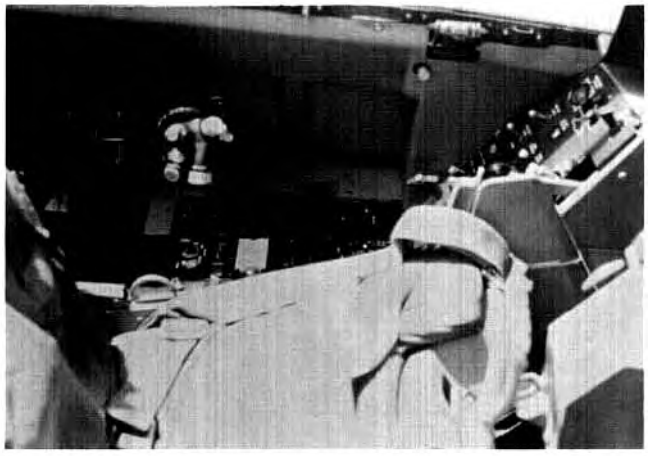
All photos this page by Bill Slatton.



Front cockpit of an F-16B.

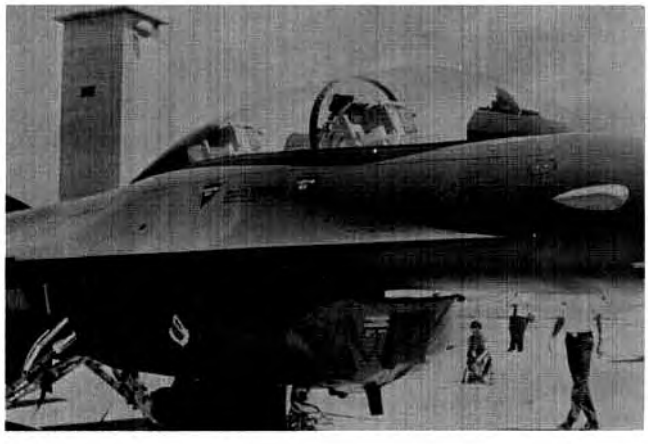


Looking down into the front cockpit of an F-16B. Note the "no step" protective covers over the HUD glass and center console to protect them from the pilot accidentally stepping on them while climbing into or out of the cockpit.



Left console In the rear cockpit of an F-16B.

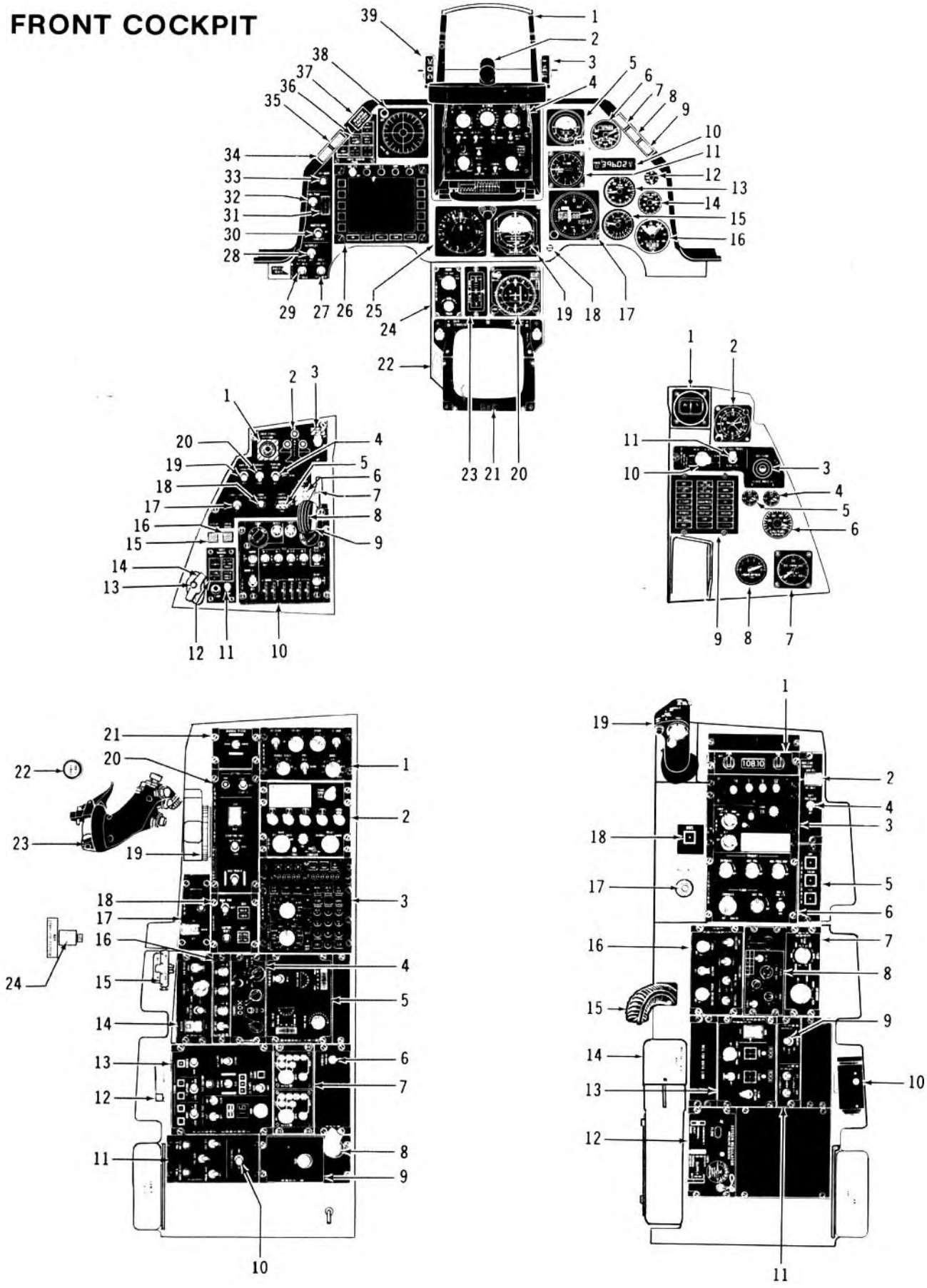
Seat and instrument panel In the rear cockpit of an F-16B.



F-16B canopy in the closed position. Note how high the pilots sit, and the excellent resulting visibility. ***(Slatton)***

F-16B canopy in open position. Note the location and the shape of the hinge. The forward half of the canopy Is slightly tinted. ***(Leader)***

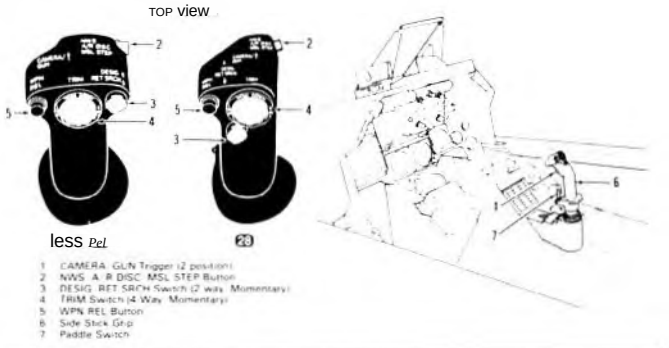
F-16B COCKPIT LAYOUTS



Courtesy of the U.S.A.F.

KEYS TO CALLOUTS INDICATED ON OPPOSITE PAGE.

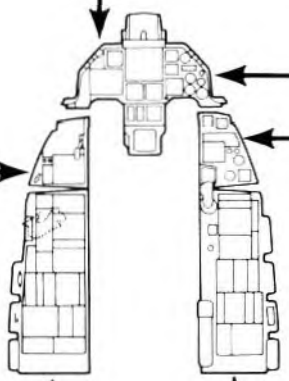
Side Stick


TOP view
less Pcl
1 CAMERA GUN Trigger (2 position)
2 NWS A R DISC MSL STEP Button
3 DESIG RET SRCH Switch (2 way Momentary)
4 TRIM Switch (4 Way Momentary)
5 WPN REL Button
6 Side Stick Grip
7 Paddle Switch

1. Radar EO Display
2. Rudder PEDAL ADJ Knob
3. AOA Indicator
4. Instrument Mode Select Panel
5. Airspeed Mach Indicator
6. Stores Control Panel
7. Autopilot ROLL Mode Switch
8. AUTOPILOT Switch
9. Autopilot PITCH Mode Switch
10. MASTER ARM Switch
11. OVRD Light
12. SMS PWR Switch
13. IFF IDENT Button
14. ENG FIRE Warning Light (Red)
15. T 0. LAND CONFIG Warning Light (Redl
16. THREAT WARNING Controls and Indicators
17. MASTER CAUTION Light (Amber)
18. THREAT WARNING Azimuth Indicator
19. AOA Indexer

1. EMER STORES JETTISON Button (Covered)
2. WHEELS Down Lights (Greenl
3. Arresting HOOK Switch (Lever Lock)
4. PARKING BRAKE ANTI SKID Switch
5. LANDING TAXI Lights Switch
6. Landing Gear Handle Downlock Release (DN LOCK RED Button
7. Landing Gear Handle Down Permission Button
8. Landing Gear Position Warning Light (Red)
9. Landing Gear Handle
10. IFF Control Panel
11. THREAT WARNING AUX (DIM) Control Knob
12. THREAT WARNING AUX Controls and Indicators
13. Landing Gear Selector Valve Reset Button
14. ALT GEAR Down Actuation Handle
15. I.E Flap Position Indicator
16. Speedbrakes Position Indicator
17. STORES CONFIG Switch
18. Landing Gear Warning HORN SII.ENCER Button
19. GND JETT ENABLE Switch
20. BRAKES Channel Switch

1. Radar Control Panel
2. UHF Radio Control Panel
3. Fire Conlrol Navigation Panel (FCNP)
4. TACAN Control Panel
5. Manual Trim Panel
6. VIDEO SEL Switch
7. ECM Pod Control Panel
8. Anti-G Suil Hose Connection
9. Anti-G Test Panel
10. STICK CONTROL Select Switch
11. Test Switch Panel
12. DEFOG Lever
13. Flight Control Panel
14. Fuel Control Panel
15. CANOPY JETTISON Handle
16. Communications Control Panel
17. EPU Conlrol Panel
18. Electrical System Controls
19. Throttle FRICTION Control
20. Engine & Jet Start Control Panel
21. MANUAL PITCH Override Switch
22. CHAFF/FLARE Dispenser Button
23. Throttle
24. REDUCED IDLE THRUST Switch (Inoperable)



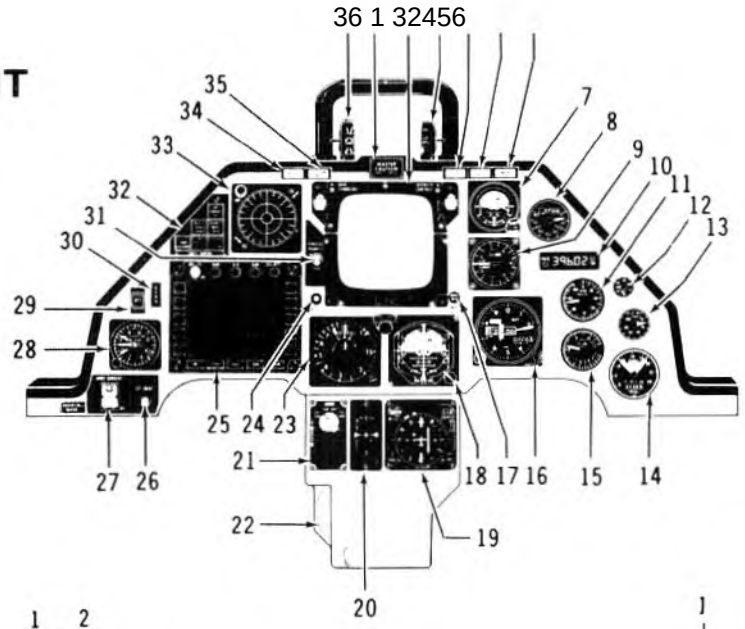
1. Hud Combiner Glass
2. Television Sensor
3. Air Refuel Status NWS Indicator
4. HUD Conlrol Panel
5. Standby Attitude Indicator
6. Fuel Flow Indicator
7. DUAL FC FAIL Warning Light (Red)
8. HYD OIL PRESS Warning Light (Red)
9. CANOPY Warning Light (Red)
10. Radio Channel Frequency Indicator
11. Vertical Velocity Indicator
12. Oil Pressure Indicator
13. Tachometer
14. Nozzle Position Indicator
15. FTIT Indicator
16. Engine Fuel Quantity Indicator
17. Altimeter
18. MRK BCN Light
19. Attitude Director Indicator (ADI)
20. Horizontal Situation Indicator (HSI)

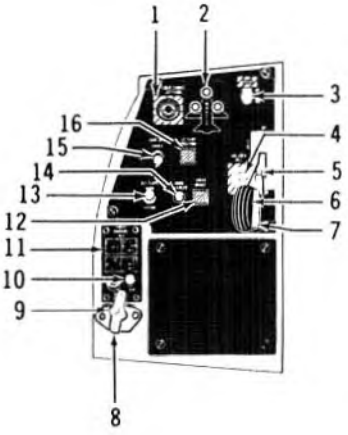
1. Standby Magnetic Compass
2. Clock
3. Oxygen Flow Indicator
4. System B Hydraulic Pressure Indicator
5. System A Hydraulic Pressure Indicator
6. EPU Fuel Quantity Indicator
7. Cabin Altimeter
8. Liquid Oxygen Quantity Indicator
9. Cannon I ight Panel
10. FUEL OTY SEL Knob
11. EXT FUEL TRANS Switch

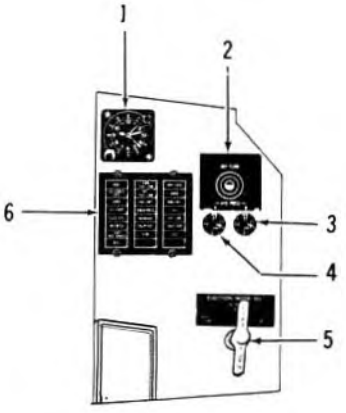
1. ILS Conlrol Panel
2. NUCLEAR CONSENT Switch (Guarded)
3. VHF Radio Control Panel
4. SUIT PRESSURE Vent Switch
5. Communications Take Control Panel
6. Interior Lighting Control Panel
7. Air Conditioning Control Panel
8. Secure Voice Panel
9. ENGINE ANTI ICE Switch
10. Utility I ighl
11. Antenna Select Panel
12. Oxygen Regulator Panel
13. Chaff Flare Control Panel
14. Map and Data Stowage
15. Oxygen Communications Hookup
16. Exterior Lighting Conlrol Panel
17. BUC GND TEST Button
18. NWS Take Control Button Indicator
19. Side Stick

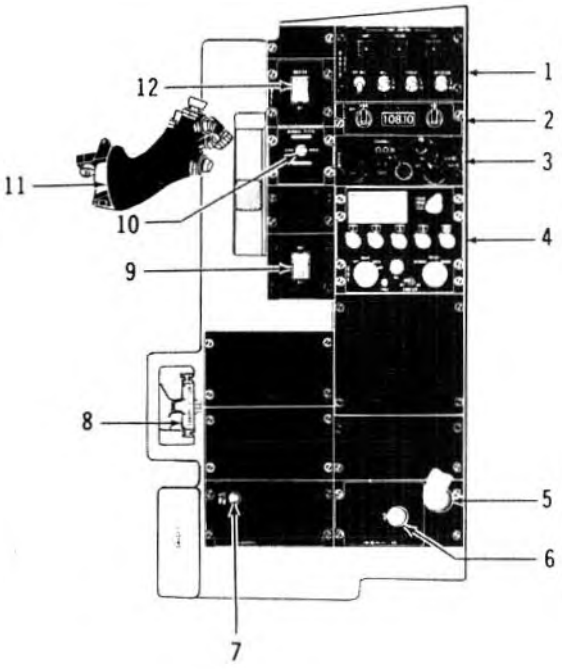
Courtesy of the U.S.A.F.

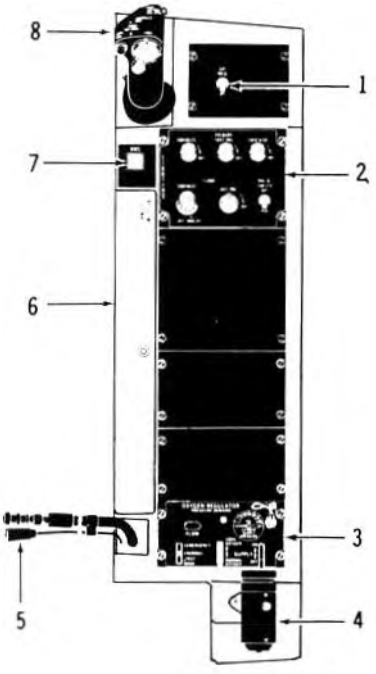
REAR COCKPIT







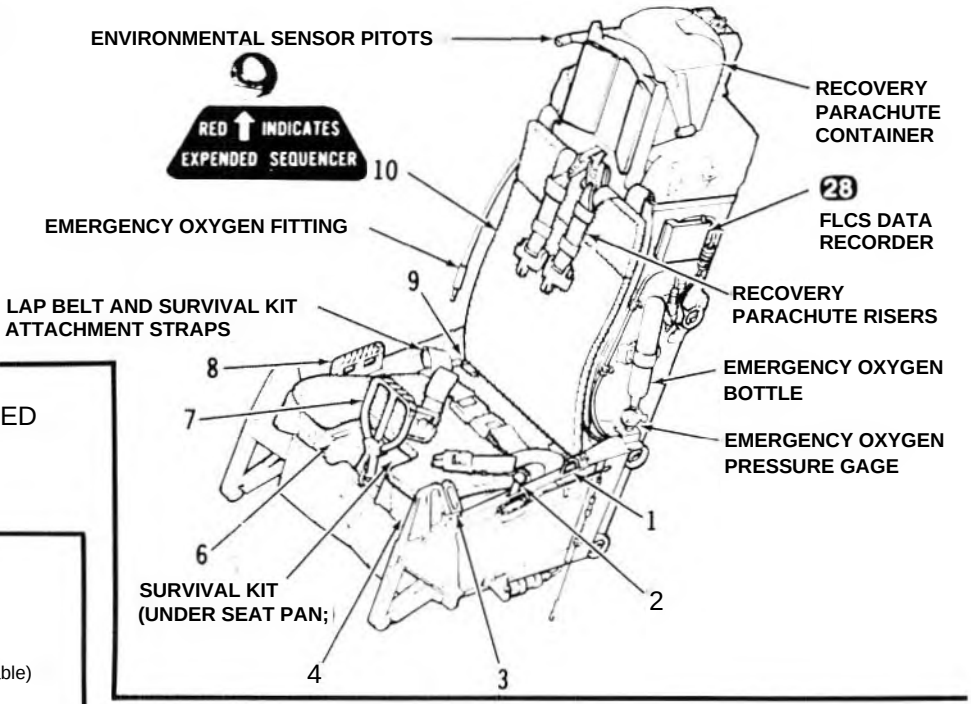




Courtesy of the U.S.A.F.

Ejection Seat

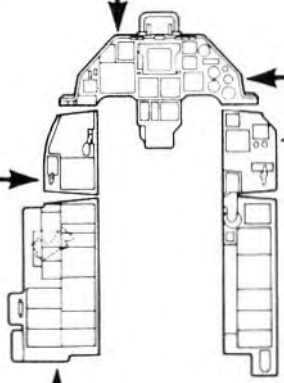
ACES II ejection seat detail. See page 34 for ejection seat detail photos and colors.



KEYS TO CALLOUTS INDICATED ON OPPOSITE PAGE.

19 Horizontal Situation Indicator (HSU
20 AOA Indicator
21 Instrument Mode Select Panel
22 Rudder PEDAL ADJ Knob
23 Airspeed Mach Indicator
24 Reduced Idle Thrust Indicator (Inoperable)
25 Stores Control Panel
26 IFF Idem Button
27 ARM! CONSENT Switch (Guarded!
28 Accelerometer
29 Slick Selector Indicator
30 OVRD Light
31 VIDEO SEL Switch
32 THREAT WARNING Controls & Indicators
33 THREAT WARNING Azimuth Indicator
34 ENG FIRE Warning Light (Red)
35 T 0 /LAND CONFIG Warning Light (Red)
36 AOA Indexer

1 MASTER CAUTION Light (Amber)
2 Air Refuel Status NWS Indicator
3 Radar EO Display
4 DUAL FC FAIL Warning Light (Red)
5 HYD OIL PRESS Warning Light (Red)
6 CANOPY Warning Light (Red)
7 Standby Attitude Indicator
8 Fuel Flow Indicator
9 Vertical Velocity Indicator
IO Radio Channel Frequency Indicator
11 Tachometer
12 Oil Pressure Indicator
13 Nozzle Position Indicator
14 Engine Fuel Quantity Indicator
15 FTIT Indicator
16 Altimeter
17 MRK BCN Light
18 Attitude Director Indicator (ADI)



1 EMER STORES JETTISON Button (Covered)
2 WHEELS Down Lights iGreen)
3 Arresting HOOK Switch (Lever Lock)
4 Landing Gear Handle Downlock Release (DN LOCK REL) Button
5 Landing Gear Handle Down Permission Button
6 Landing Gear Position Warning Light (Rud)
7 Landing Gear Handle
8 ALT GEAR Down Actuation Handle
9 Landing Gear Selector Valve Reset Button
10 THREAT WARNING AUX (DIM) Control Knob
11 THREAT WARNING AUX Controls and Indicators
12 Speedbrakes Position Indicator
13 ALT FLAPS Switch (Lever Lock)
14 Landing Gear Warning HORN SILENCER Button
15 GND JETT ENABLE Switch (Lever Lock)
16 I.E Flap Position Indicator

1 Clock
2 Oxygen Flow Indicator
3 System B Hydraulic Pressure Indicator
4 System A Hydraulic Pressure Indicator
5 EJECTION MODE SEL Handle
6 Caution Light Panel

1 SUIT PRESS Vent Switch
2 Interior Lighting Control Panel
3 Oxygen Regulator Panel
4 Utility Light
5 Oxygen Communications Hookup
6 Map and Data Stowage
7 NWS Take Control Button Indicator
8 Side Stick

1 Communications Take Control Panel
2 ILS Control Panel
3 TACAN Control Panel
4 UHF Radio Contiol Panel
5 Ami-G Suite Hose Connection
6 Antr-G Test Burton
7 MAL & IND LTS Test Button
8 CANOPY JETTISON Handle
9 BUC Switch
10 MANUAL PITCH Override Switch
11 Throttle
1? FUFI MASTER Switch

Courtesy of the U.S.A.F.

YF-16 & F-16A/B VARIATIONS

The first prototype YF-16 with canards originally carried by this aircraft. (General Dynamics)

CCV AND AFTI

The first prototype YF-16 was used in a program conducted by the Air Force Flight Dynamics Laboratory. For this program two large canards were attached to the sides of the air intake, and inputs from the control system were modified to permit direct side-force control. However, thecontrol-configured vehicle (CCV) had no redundancy in the flight control system, and required a highly skilled pilot to fly the aircraft. Special flight clearances were required on many of theflights. In June, 1976, an accident occurred involving the CCV, and repairs took until February. 1977.

In December, 1978, the F-16A was selected forthe AFFDL's Advanced Fighter Technology Integration (AFTI) program. General Dynamics is utilizing their previous experience with the YF-16A CCV program on the AFTI F-16. The same canards used on the YF-16 will be installed on FSD F-16A, serial number 75-0750. The canards will allow the aircraft to be pointed approximately 5° to the left or right while maintaining its flight path, and will permit the aircraft to be turned without banking.

Artist concept of AFTI/F-16 in flight. For an actual photo of this aircraft see page 33. (General Dynamics)

F-16B “WILD WEASEL”

F-16B "Wild Weasel" aircraft with electronic pods on the wingtips. Shrikes on the outboard stations, Standard ARMs on the center wing pylons, and an ALQ-119 ECM pod centerline. (General Dynamics)

Since the early part of the war in Vietnam, the U.S. Air Force has recognized the need for dedicated air defense suppression aircraft to neutralize the enemy’s ground based air defenses.

Since the end of the hostilities in Vietnam, the Air Force has replaced its F-105s with F-4G aircraft to perform the "Wild Weasel" mission. But recognizing the possible future needs of the Air Force, and the needs of other air forces presently without dedicated air defense suppression aircraft. General Dynamics funded a proposal to use the F-16B as a "Wild Weasel."

The first FSD F-16B. serial number 75-0751. was configured with the existing Loral ALR-46 radar homing and warning receiver to cue defense-suppression weapons. The wingtip-mounted Sidewinder racks were replaced with antenna pods which could detect enemy ground radar signals. Texas Instruments AGM-45 Shrikes were mounted on Stores Stations 2 and 8. General Dynamics/ Pomona AGM-78F Standard ARM anti-radiation missiles were located at stations 3 and 7. The Hughes AGM-65 Maverick missile was shown on both a single and triple ejector rack at stations4and 6 in lieu of a pair of 370 gallon drop tanks

The same aircraft with a different ordnance load. Two Shrike anti-radiation missiles are carried on a double launcher under the left wing, while three Maverick E.O. missiles are carried on a triple launcher under the right wing. (General Dynamics)

AIM-7 SPARROW MISSILE TESTS

YF-16, 01567, takes off with two AIM-7 Sparrow missiles under the wings on stations 3 and 7.

(General Dynamics)

The biggest complaint lodged against the Fighting Falcon in some circles is its lack of an all-weather air-to-air capability. With the poor weather often experienced in Europe, many experts maintain that an all-weather capability is not a luxury but a necessity. Although the U.S. Air Force has not specified such a requirement for its F-16s, potential buyers in other nations have.

For this reason, General Dynamics has demonstrated the capability of the F-16tocarry and launch the radar-guided AIM-7 Sparrow missile. Unlike IR guided missiles which are ineffective in overcast the AIM-7 is all-weather capable, and would add a new dimension to the air-to-air capabilities of the F-16. According to General Dynamics, this radar missile growth capability is built into the F-16 and could be added if requirements dictate.

One of the unusual facets of the Sparrow missile tests with the F-16 is the number of different places the missiles were attached to the aircraft. As photos on these pages show, the missiles were attached to the main landing gear doors, under the wings, and even on the wingtips in place of the Sidewinders. All photographs of launches show the missile leaving the pylon attached to the main gear doors, and it is this position that General Dynamics indicates for the potential radar missile growth of the aircraft.

AIM-7 being launched from a station mounted on the main gear door.

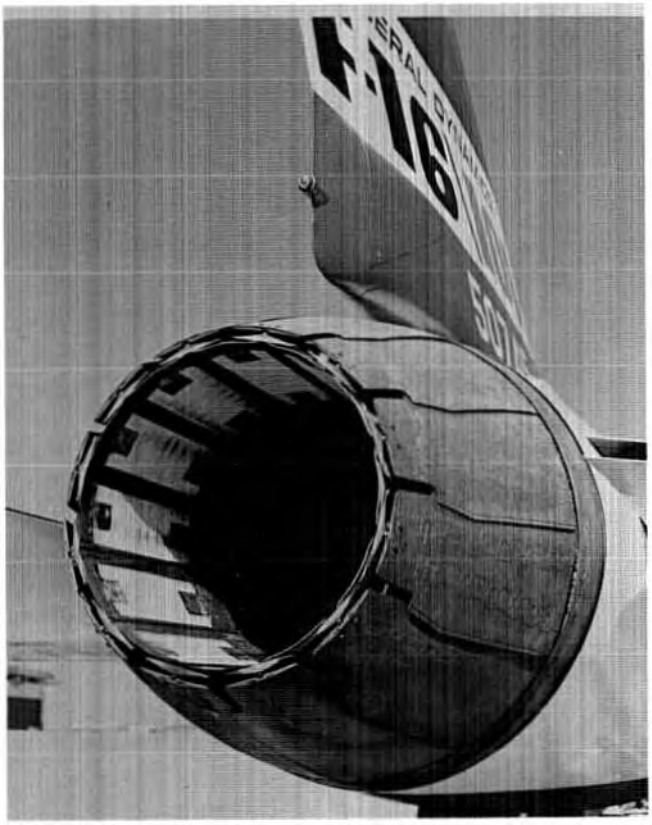
The second prototype YF-16, 01568, carrying Sparrows on its main gear doors. After the first FSD aircraft had the red, white, and blue scheme applied, this aircraft was repainted in the same scheme Including the addition of the flags on the nose.

The same aircraft, 01568, but without the flags, with the AIM-7s on the wingtip stations.

All photos on these two pages are from General Dynamics.

ALTERNATE ENGINES

First FSD F-16A, 50745, as *used as the test bed for the General Electric F101 engine. (General Dynamics)*

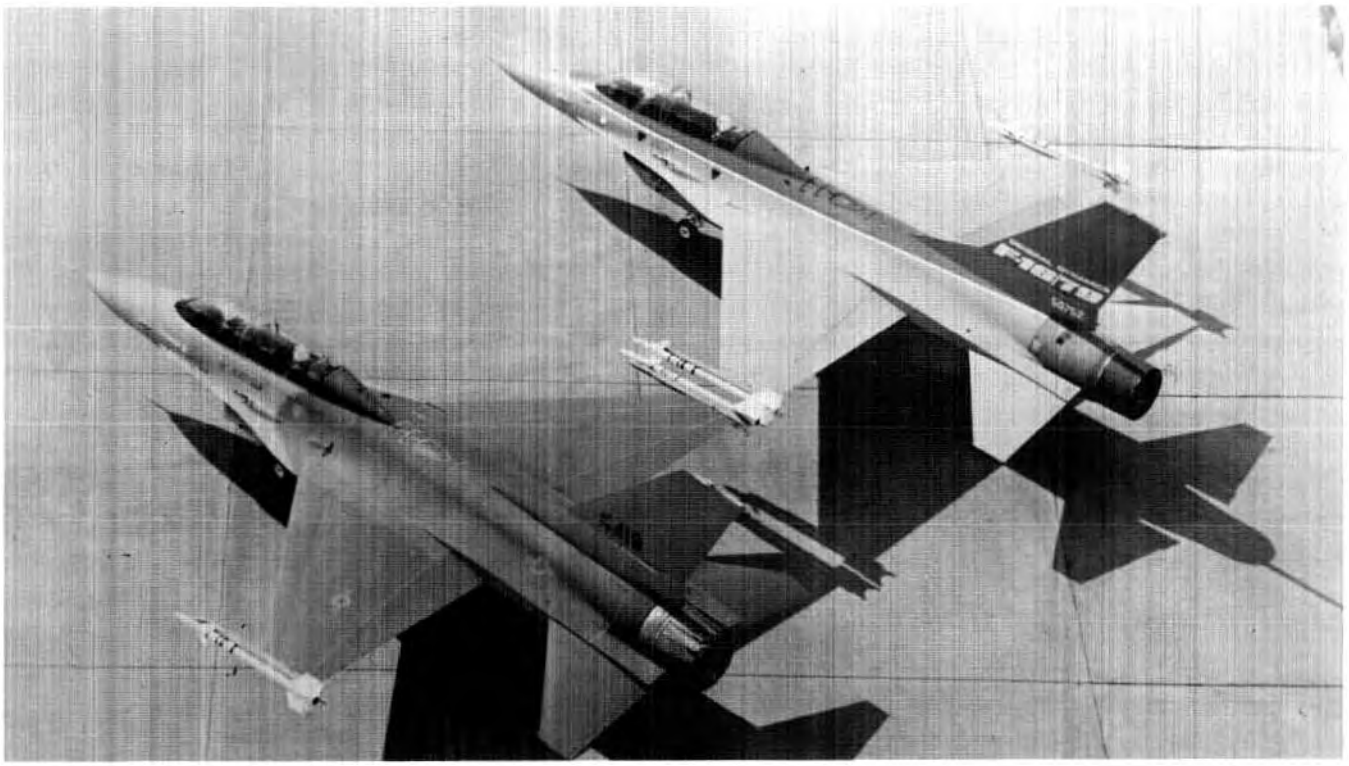


Exhaust nozzle detail on the F101 engine as Installed on F-16A, 50745. (General Dynamics)

The F-16 has flown with two other engines installed in place of thestandard Pratt & Whitney F100. In one case a General Electric F101 DFE (derivative fighter engine), derived from the engine used in the B-1 bomber, was tested. The primary reason for testing this engine seems to be to insure an alternate power plant to the F100 if required. The Navy also tested the engine in the F-14 Tomcat.

In another program the second FSD F-16B, 75-0752, was leased back to GD from the Air Force as a test bed for the installation of a General Electric J79 engine. This was funded by General Dynamics for several reasons. First, it would provide an alternate and less expensive engine for export sales to less sophisticated foreign buyers while still permitting the F-16 to operate asa Mach 2,9 Gaircraft. Second, it seemed likely at the time the tests were conducted that Carter administration policy might not allow widespread export of the F100 engine. But with the J79 engine, the F-16 would meet the Administration's guidelines for an "Intermediate Export Fighter."

In order to utilize the J79 in the F-16, several changes had to be made. A new air intake with a fixed compression ramp designed to accommodate



F-16B with the J-79 engine installed (right) positioned next to a standard F-16. ***(General Dynamics)***

the 25% less airflow for the J79 was installed. Second, an 18 inch extention of the aft fuselage was required to accommodate the longer J79 engine. Additionally, several internal structural changes had to be made. The forward engine mount rail was extended forward. New thrust mounts were added to the new bulkhead and for the aft engine attach point. A new fuselage-mounted steel heat shield running the entire length of the engine was added. The additional weight resulting from these changes necessitated the addition of 300 pounds of ballast against the avionics bulkhead in the nose in order to retain an acceptable balance and CG characteristics.

The first flight of the F-16/79 was made at Ft. Worth on October 29. 1980, and additional flight testing was accomplished at Edwards AFB. A total of 71.4 hours were accumulated during 72 flights by the General Dynamics test pilot and USAF test pilots. Air Force pilots flew mock combat missions against other fighters, dropped MK 82 bombs, and evaluated maneuvering energy capabilities toevade antiaircraft fire. Included in the test program were rapid throttle excursions at various altitudes in order to check engine/airframe compatability. Flights were made to 50,000 feet at airspeeds exceeding Mach 2, and maneuvers up to 9 G were conducted.

Comparison of the exhaust nozzles on the F-16/79 and a standard F-16. ***(General Dynamics)***

Close-up comparison of the F-16/79airintake (foreground) with the standard intake.
(General Dynamics)

MODELER'S SECTION

PRODUCT REVIEW POLICY. In each of our publications we will try to review kits and decals that are available to the scale modeler. We hope to be able to review every currently available kit that is useable by the scale modeler. Kits produced in the past that are no longer generally available, and those more intended to be toys than accurate scale models will not usually be covered. Additionally, we do not intend to give a complete step-by-step, correction-by-correction account of how to build each kit. Instead we intend to give a brief description of what is available to the modeler, and point out some of the good and not-so-good points of each kit or product. In this way we hope to give an overall picture of what the modeler has readily available for his use in building the particular aircraft involved.

KIT REVIEWS

1/144th SCALE KITS

I

Crown 1/144th Scale Kit P802-100

One of two 1 /144th scale kits of the F-16 available today, this tiny model is generally accurate in outline. Details are few due to the small size of the kit, with the entire interior consisting of only a seat. External stores consist of two 370 gallon fuel tanks of the older prototype variety, and the older centerline tank with the fins. Two AIM-9 missiles are provided for the wingtips. The kit represents a FSD aircraft, and has markings for the first and third FSD aircraft. Of the two 1/144th scale kits available, this is perhaps the better, but only by a small margin. Recommended for modelers who like to work in this small scale.

LS 1/144th Scale Kits J3 and J6

Released twice with different decals, this kit is also modeled after the FSD aircraft. Details are even less than with the Crown kit. For example, there is just an opening for the cockpit without even a seat provided. The two370gallon tanks are provided, but there is no centerline tank. However, four Sidewinders are provided, not only for the wingtips, but for two underwing stations as well. Due to the small size involved, the two pylons for the underwing Sidewinders are the wrong shape, and they are located too far inboard. We would suggest leaving these off. Both of these models are incredibly small, but make for a nice comparison when "parked" next to a 1/144th scale airliner. With work they can become very attractive models. We recommend these models, keeping in mind the molding considerations that must be faced when working in such a small scale for an aircraft the size of an F-16.

1/140th SCALE KIT

Minicraft/Hasegawa Press Loc Kit 1173

This is more of a beginner's kit that requires no glue and merely snaps together. As such, there is some compromise in detail such as the lack of any cockpit whatsoever. Sidewinder missiles are molded as part of the wing, and due to mold release considerations are rotated 45 degrees from the position they should be in. Therefore the fins form a + instead of an * when viewed from behind. But this is not a bad kit. particularly for the "entry level" modeler who is just starting out. Older, more experienced modelers, who want more detail and sophistication in models must also realizethe valueof thesesimple kits. It is these kits that bring new modelers into this hobby, modelers who cannot afford the bigger kits, and without these younger modelers entering the hobby now. there will be no hobby in a few years. The decals in this kit are the best of any of the smaller-than-1/72nd scale kits, representing a production aircraft from Hill AFB. These decals are close enough in size to 1 /144th scale to be used on the two 1/144th scale kits covered above. Recommended for the young, new modeler.

1/72nd SCALE KITS

Minicraft/Hasegawa 1/72nd Scale Kit 1110

This was one of the first models of the F-16 to become available, and it represents a YF-16 prototype in shape, dimensions, and details. Indeed, if its a prototype you want to build, this is the kit to use. Molding is clean, crisp and delicate, and the model is quite accurate for the prototype. Small details appropriate to the YF-16 are accurately represented

such as the Y-shaped pitot tube, the blade antenna on the spine, and thesplit nose gear door. Thecockpit has an instrument panel with a decal to represent the instruments, a HUD glass, pilot, but no side consoles. Underwing stores include a centerline tank like the one used on the prototype, 2000 pound "smart" bombs, and ECM pods. Consisting of 41 parts, this kit builds up into a beautiful model. We recommend this kit as the best available of the YF-16 prototypes.

Lindberg 1/72nd Scale Kit 982

This kit is advertised by Lindberg, and is claimed on their box, to be a 1/100th scale kit. This just simply isn't so! It is unfortunate too, because 1/100th is the only scale that does not have at least one representative kit of the F-16. Indeed, we would not have even bought this kit except for the fact that it was supposed to be in 1 /100th scale. It is actually close to 1/72nd scale in size, but then the kit is so inaccurate it would be a mistake to call it a scale model.

The kit is the snap-together type, and falls into the toy category. We would not even have reviewed this kit except to warn modelers that this is not a 1 /100th scale kit. A re-release is scheduled for 1982, and Lindberg still insists on calling this a 1/100th scale kit. In our opinion this is deceptive whether it is intentional or not. But then, you would expect a model company to know what scale its models are in wouldn't you? Decals do not represent anything resembling an F-16. Definitely *not* recommended!

Revell 1/72nd Scale Kits H-222 and 4410

Coming out about the same time as the Minicraft/ Hasegawa kit, this model took the first steps in the evolution from a YF-16 to an FSD aircraft. Included in this evolution were the one-piece nose gear door, the larger nose section, the lack of the blade antenna on the spine, and the addition of some of the "bumps" in the skin like the one where the gun drive assembly is and those for the RHAW antennas on the nose. After making these changes, it is surprising that Revell provided tail numbers that are fictitious, but the kit did provide the first basis for building an FSD or production F-16 in 1/72nd scale.

Revell provided an extensive amount of extras in their kit including underwing stores, a tow tractor, engine stand, and engine. The external stores are the most extensive provided to date in any 1/72nd scale F-16 kit. They include two of the prototype style 370 gallon tanks, a prototype centerline tank, two ECM pods, two MK84 2000 pound bombs, two multiple ejector racks with 12 MK82 500 pound bombs, and four AIM-9J Sidewinders for wingtip and underwing stations.

The model itself is well detailed with acockpitthat includes an instrument panel, rudder pedals, consoles, and seat. Two engine exhaust nozzles are provided, one in the open position and one in the closed, allowing the modeler a choice. Speed brakes may be shown open or closed, and the tail hook may be shown up or extended. It is obvious that Revell went to a lot of trouble and expense to provide a lot of options and extra details in their kit. Considering that the actual F-16 had not progressed to the FSD aircraft stage at the time they did their research, Revell has to be commended for doing a good job. With some updating to a production aircraft, this kit can be built into a very nice model. We recommend this model.

Monogram 1/72nd Scale Kit 5200-0200

Monogram evidently got caught between the YF-16 prototypes and the FSD aircraft when researching this kit since features from both aircraft are included. The kit is closer to the FSD aircraft in size and shape, but has the split nose gear door of the prototype. Representing neither version, the model has no pitot tube. The blade antenna on the spine, seen on the prototypes but not the FSD aircraft, is not included on the model.

A centerline fuel tank is provided as are two 370 gallon tanks in the style used on the prototypes and FSD aircraft. Multiple ejector racks and bombs may be substituted for the wing tanks. Like the Revell kit, this Monogram kit can be built to represent a production F-16, but it will take some work and updating. Recommended.

Matchbox 1/72nd Scale Kit PK-122

This kit was the first to represent the two-place F-16B by providing alternate parts. However, the model is, in a word, crude. The seats look more like recliners than ejection seats. The leading and trailing edges of the wings and stabilizers are thick, and look more representative of 2 * 4 s than the flying surfaces of a modern jet fighter. The external stores are inaccurate in dimension and proportion, and the forward fins on the Sidewinders don't correctly represent those on any version of themissile. Landing gear struts are crude and inaccurate. In short, this kit just does not measure up to any of the other kits, and we simply cannot recommend this kit for the serious modeler.

Testors 1/72nd scale F-16 kit built as an F-16B. ***(Evans)***

Testors 1/72nd Scale Kit 683

Detail & Scale recommends this kit as the best available of a production F-16 in 1/72nd scale. There are some errors and omissions, but these are relatively small, and can be rather easily corrected. For example, the small intakes just behind the main landing gear wells are omitted, but are easily made from scrap plastic.

The kit comes with alternate parts for building an F-16A or F-16B. Cockpit interior is about average for 1/72nd scale, and can be detailed out nicely. The control grips are too fat and are shaped as cylinders rather than having the proper grip shape. Seats more closely resemble the SHIS type than the ACES II variety found in production aircraft, but this is a problem with all F-16 kits. Surface scribing is recessed and nicely done. Shape and measurements check out well, and small parts, such as landing gear struts, are better detailed than on other 1/72nd scale kits.

External stores consist of two of the old style wing tanks, which should be corrected, two "smart" bombs, two Sparrow missiles, and two Sidewinders. It seems that ever since Hasegawa put Sparrows in their 1/32nd scale kit, other companies have done the same. This is a poor choice because no operational F-16s carry this missile. They wereonly tested on prototype aircraft, and should be left off the model. Substituting a triple ejector rack with 500 pound bombs from another kit would be recommended.

All things considered, this is a good kit. and we recommend it as the best available in 1/72nd scale.

1/48th SCALE KITS

ESCI/Scale Craft/ERTL 1/48th Scale Kit SC-4010

ESCI sales in the United States have been transferred from Scale Craft to ERTL, but it is doubtful that there will be any change in existing kits.

The ESCI F-16 is one of theirearlierkits, and in no way does it match up to their more recent releases. We'll start with shape. In plan view, from the cockpit area aft, things are fine. Forward, the nose ends up about 3/16" too long. Fuselage width at the radome joint line is correct, but becomes narrower towards the tip. In side profile the radome is also narrow and more pointy looking. The bottom profile from the air inlet to tailpipe is all off. The inlet itself is fine, but then the fuselage is pinched upward, making it look like an early area ruled design. Then, at the base of the vertical fin. it is too deep just before tapering to the tailpipe. The gap between the tail and vertical fin base is too big, and the strakes bear little resemblance to the real thing.

The fuselage is molded in top and bottom halves. The top includes radome, wings without launch rails or flaps, and horizontal stabilizers. The bottom includes radome and wing bottoms inserting at a line behind the leadingedgeandendingattheendofthe flap. With the radome done this way. you end up with a seam to fill out to the tip on the sides of the nose.

The inlet is molded in top and bottom, forming an assembly back to the main gear bay. The manner in which the parts are shaped along the joint line pro-

duces contours that are quite different from the aircraft. The flaps are separate parts with an additional filler piece at the inner, bottom ends next to the fuselage. These do not fit very well and require filling to hide the gap where none should be.

The cockpit follows usual practice with floor piece including consoles, separate instrument panel, sidearm controller and seat. The seat is located by a step in the floor which puts it too far forward and too upright. The clear canopy is in two parts with a separate lower frame for the opening section. Neither fits too well.

Again, the little bumps on each side of the nose are separate parts, grossly oversized, with absolutely no locating provisions given.

In short, this is not one of the better F-16 kits on the market, and the serious modeler would be better off with another kit.

Tamiya 1/48th Scale Kit MA-122

The Tamiya 1 /48th F-16 is an excellent kit. It has the two piece nose gear door, which should be glued together to represent the later one-piece type, the vertical fin with the lights on both sides at the tip, and protruding housing at the base of the rudder. In comparing the kit to our 1/48th drawings, all profiles inside and top views are as close as probably can be produced in a model. The only discrepancy is a few scale inches undersize at the air inlet. The landing gear bays are nicely detailed, but the missile launching rails are 6 inches too short.

The kit is molded in white plastic which makes painting the interior of the landing gear bays gloss white much easier than with a darker plastic, while the exterior grays cover the white easily.

The assembly of this kit is different than any other

Tamiya 1/48th scale F-16. ***(Evans)***

Monogram 1/48th scale F-16A. ***(Evans)***

F-16 kit in any scale. Instead of being made in top and bottom fuselage pieces, this kit has left and right sides split on the centerline as in most kits. As a result, the landing gear bays have all the detail in place. The only part to be installed is the aft bulkhead. The nose gear well is the usual cavity to be assembled inside the fuselage halves.

The base of the vertical fin is part of the fuselage halves, leaving the fin as a solid piece. The only assembly problem is getting the top seam matched so that little sanding is required to keep from removing the detail.

Perhaps the only minus to this kit is the canopy. Tamiya chose not to separate the bottom metal frame from the fuselage resulting in a closed canopy being the only choice. The separation lines are very fine and really should be scribed in. The closed canopy is a shame, as the cockpit interior is fairly well done. The consoles and instrument panel have decals. the sidearm controller is there and the seat is done in three pieces and mounts at its laid-back attitude.

A nice feature of the fuselage split is that the horizontal stabs are not molded as part of the top half, but are separate and mount on round pins; so it is possible to mount them at any pitch angle. The air brakes are done in separate top and bottom pieces and could be shown open with some extra work.

External stores are limited to the old style 370 gallon tanks, and the Sidewinder missiles. This lack of ordnance is a shortcoming in all 1/48th scale F-16 kits except the Otaki kit. But even with this shortcoming, the F-16 by Tamiya is one of the better kits available today, and we recommend it.

Monogram 1/48th Scale Kits 5401 and 5421

Monogram has released its 1/48th scale F-16 twice, once with decals for the red, white, and blue scheme of the first FSD aircraft, and later with markings, for an aircraft of the 388th TFW at Hill AFB. As with other 1/48th scale F-16 kits, this model lacks many of the details such as the lights on thesidesof the intakes, RHAW antennas, and actuating cylinders for the main gear doors. Again, all of these are easily added by the experienced modeler who fqllows the information given on the pages of this book. The nose gear door is the split type, and should be glued together so as to represent the one-piece type used on production aircraft. The tongue on the leading edge of the door should be removed and used to fill in its respective notch under the intake. Struts on the nose landing gear are incorrectly positioned, but all of this can be corrected to make a nice model.

A nice feature of this kit is the canopy and rails, which are separate pieces from the fuselage, and can therefore be shown in the open or closed position. The seat is of the SIHS type, and will have to be modified to represent the ACES II seat used in production aircraft. The control grip is molded as part of the pilot's hand, so if you don't use the pilot you have to come up with your own grip. Stores are limited to the prototype style fuel tanks which are erroneously mounted to a weapon pylon instead of a fuel pylon.

Quite frankly this is not one of Monogram's better 1 /48th scale kits, but one must keep in mindthatthe kit was researched early in the F-16's development, and many things have changed since then.

Otaki 1/48th Scale Kit 18

The latest kit in this scale of the F-16 is from Otaki, and is quite a disappointment. From looking at the box top you might think that the model inside is an

up-to-date production version complete with external stores. The kit does have sbme crude MERs with 500 pound bombs, which is more ordnance than any other F-16 kit in this scale, but the model in no way represents a production aircraft. It seems that this kit comes closest to the first YF-16 prototype than to any of the other F-16s. It is way too small for an FSD or production aircraft. Other features which indicate that this kit represents a YF-16 are the antenna on the spine just ahead of the vertical stabilizer, the split nose gear door, the shorter wings, and the small nose.

The gun fairing is molded separately from the fuselage, and fits very poorly. The cockpit is fair, with the control handle being located in a position that would cause the pilot to have to fly the aircraft with his elbow! Fit is generally poor, and parts just do not line up right. At $13.95 this kit just doesn't seem worth it, and with better models available, we just can't recommend it.

Revell 1/48th Scale Kit 4305

This is one of the better F-16 kits, and although it has its faults, it can be made into a nice model. It has the same faults as most of the other kits including prototype fuel tanks, no ordnance, no lights on the intakes, and missing RHAW antennas. Shape and size are fairly good, and our sample fit together nicely. Scribing is mostly the raised variety, and we sanded off all of the many panels on the wings. They just look too big for this scale. The prototype SIUS seat is provided, and cockpit detailing could use some help from the modeler.

The model is cleanly molded, and with the addition of some stores from other kits, updating of the fuel tanks, and a lot of detailing, this kit easily becomes a very attractive model of the F-16. As one of the better kits available, we recommend it.

1/32nd SCALE KITS

Revell 1/32nd Scale Kit 4701

The Revell 1/32nd scale F-16 followed the Hasegawa/Minicraft kit on the market, and if you have both you will see a lot of similarities right down to the ordnance load. The Revell offering is a few dollars cheaper, and is not as detailed or as cleanly molded. However, it can be made up into an impressive looking model with work.

Revell took some shortcuts like making a one piece canopy that prevents building the model with an open cockpit. But to make up forthis you get rubber tires! The kit has the same omissions as the others that we've listed before such as the lack of lights on the intakes, missing RHAW antenna, and other details. It has theextra bladeantennas just behind the cockpit and above the gun that are not used on production aircraft. Sparrow missiles are included, and like the antennas, should not be used on a production aircraft.

Impressive by its size, and reasonably accurate, a good model can be built using this kit. You don't get as much detail as you do in the Hasegawa kit, but you don't pay as much, and its up to the individual modeler's taste as to whether he wants to spend more to get more.

In 1982 Revell is re-releasing the kit in Israeli markings, and photos of the new model show some additions of lights and other details. Howeverall the basics remain the same to include the ordnance

Revell 1/32nd scale F-16. ***(Evans)***

load.

Minicraft/Hasegawa 1/32nd Scale Kit 100

For our money this is the best F-16 kit on the market in any scale. Hasegawa used the first FSD aircraft as a basis for its model, and this kit is accurate for that aircraft right down to the last detail. To represent the later two FSD aircraft or a production aircraft, the modeler needs to delete the blade antennas on the spine, add lights to the intakes, and make a few other changes as described in this book.

Detail abounds including ammo drum, cannon, radar, and a beautiful cockpit that requires only seat belts to make it look complete. To paint the cockpit in our model, we spent over twenty hours, and the result was well worth it. We would suggest using plastic card to plug the holes behind the consoles, or else you will be able to see all the way down to the bottom of the fuselage.

The kit is nicely molded, and the parts fit together beautifully. The canopy is tinted and can be shown open or closed. There is a mold line down the center that needs to be polished off after a light sanding.

The ordnance stores are extensive with the prototype centerline and wing tanks, ''smart" bombs, multiple ejector racks with bombs, four Sidewinders, and those ever-present Sparrows which are best placed in the parts box. The forward fins for the Sidewinders are the wrong shape, and they should be corrected, and the 500 pound bombs are the inert type without fuses that were displayed on F-16s for publicity shots early in the program.

By giving this kit the effort it deserves, and by updating as necessary, a real masterpiece can result.

In 1982 Minicraft and Hasegawa will re-release this kit in the new Thunderbird scheme, and with these colorful markings, the resulting model is beautiful. We highly recommend this kit.

CONVERSION CANOPY

A conversion canopy to convert either of the 1/32nd scale models to a two-seat F-16B is available through M.A.L. Hobby Shop, 108 South Lee Street. Irving, Texas 75060. Instructions are provided for making the conversion. Price is $6.95 plus postage.

COCKPIT PLACARDS

Waldron Model Products is producing 1/32nd scale F-16 cockpit placards to add to their fine line of model detailing accessories. Detail & Scale received a prototype of these placards just before this publication went to press, and our sample looked very good. For information write to: Waldron Model Products, 1358 Stephen Way, San Jose, California

Minicraft/Hasegawa F-16 in 1/32nd scale. ***(Evans)***

Photo showing some of the detail on the Hasegawa/Minicraft 1/32nd scale F-16. ***(Evans)***

95129.

GENERAL COMMENTS

When the first F-16s started flying, most of the kit manufacturers rushed out to get their kits out as fast as possible. As a result the market was swamped with F-16 models, and moreareon theway. Very few aircraft are represented by so many kits, and it is still early in the operational life of the F-16. Yet not one of these kits is really a definitive model. None can be built as a production aircraft without some extra work and updating by the modeler. For example, none has an accurate ACES II ejection seat, none have the lights on the intakes, and none have all the RHAW antennas even though several came out after the real aircraft had the changes. Several kits incorporate some changes that were made after other changes that are missing on the same model.

Detail is missing also. Not one 1/72nd scale kit. nor even one 1 /48th scale kit, has the actuating cylinders for the main gear doors, and these are relatively large and noticeable parts. In 1/48th scale, only the Otaki kit has any ordnance other than the old style fuel tanks which are not even used on production aircraft.

MPC, now with Airfix's line in the United States, has announced another F-16 kit in 1/72nd scale for 1982. Hopefully it will be a true production aircraft, and will avoid all of the errors and omissions made in other kits. If it does, it should be a popular model, if not, it will be just another F-16 in 1/72nd scale.

Whether MPC/Airfix's new kit is the definitive model or not, Detail & Scale hopes that there will soon be such a kit in each of the popular scales. The F-16 looks like it will be around for a long time in large numbers, and it certainly deserves better representation in the hobby of scale modeling.

DECAL SUMMARY

Note: It is impossible to completely review decals unless the reviewer has actually used the decals on a model to see how they fit. Additionally, markings on a given aircraft can be changed from time to time, so it is possible that the decals may be accurate for one point in time and not another. Therefore, this section is more of a listing of decals available than a review. Review comments are made only in regard to fit when we have actually used the decals or as to accuracy when the evidence clearly indicated an error.

1/144th Scale Kits

LS Kit J3: Contains markings for the 2nd and 3rd FSD F-16As, S/N 75-0746 and 75-0747.
LS Kit J6: Contains markings for the 1st FSD F-16A, S/N 75-0745, in colorful red, white and blue scheme.

Crown Kit P802-100: Contains markings for the first FSD aircraft, S/N 75-0745, in the red, white and blue scheme, and the third FSD aircraft, S/N 75-0747, in its unusual gray camouflage scheme.

1/140th Scale Kit

Minicraft/Hasegawa Press Loc Kit 1173: Contains markings for a USAF Block 1 F-16A, S/N 78-007, from the 388th TFW, Hill AFB.

Note: Because of the small sizes of the models, the decals for the 1/144th and 1/140th scale kits contain only the most basic marking and insignia.

1/72nd Scale Kits

Italeri Kit 130: Contains markings for 4th USAF FSD F-16A. S/N 75-0748, and a Dutch Block 1 F-16B. with Dutch S/N J-259.

Italeri/Testors Kit 683: Contains marking for four aircraft from Hill AFB between 1979 and 1980 as follows:

Model	Block	S/N	Unit
F-16A	1	78-0002	388th TFW, 16th TFTS with blue fin stripe
F-16B	1	78-0079	57th FWW, MOT&E with black and yellow checkered fin stripe
F-16A	FSD	75-0747	388th TFW, arrival ceremony aircraft
F-16B	5	78-0358	Israeli Air Force (S/N 006)

Note: The Star of David insignia is provided in kit. This was used after delivery to Israel. While operating within US airspace, the Stars of David were covered with US national insignia at all four wing locations.

The decals for the Testers kit were done by Microscale, and have the same bogus looking instrument panels and consoles with the white background as provided on the Microscale sheets listed below.

Matchbox Kit PK-122: Contains two sets of markings. One set is for the first USAF FSD F-16B, S/N 75-0751, and the other is for the Dutch Block 1 F-16A, S/N J-212. Unit insignia are also provided for the 322nd and 323rd Squadrons of the Dutch Air Force.

Minicraft/Hasegawa Kit 1110: Both the U.S. and Japanese versions of the kits contain the same markings for the first two prototype YF-16s. The first prototype, S/N 72-1567 carried the colorful red, white, and blue markings. The second aircraft, S/N 72-1568, was initially painted in a blotchy pattern of air superiority blue, FS595a color 15450 and Ford Motor Company Wimbeldon White with white tail number01568. Markings are also provided for the later two compass ghost grays (FS 36375 and 36320) with the tail number presented as AF/01 568 in black. As re-released in 1982 this kit will have the markings for the Thunderbirds demonstration team, but since the kit is of a YF-16 instead of an F-16A, these markings will not be accurate for the model.

Monogram Kit 5200-0200: Markings are provided for the first FSD aircraft, S/N 75-0745, in the rollout scheme.

Revell early Kit H-222: Contains markings forthe colorful red, white, and blue General Dynamics aircraft and a two-tone gray USAF aircraft. The tail numbers 07515 and AF/07-516 are ficticious.

Revell later Kit 4410: Retains the General Dynamics prototype markings with the erroneous tail number and a new set of markings for a USAF Block 1 F-16A, S/N 78-0001.

1/48th Scale Kits (Review samples courtesy Triple Alliance Hobby Shop).

ESCI Kit SC-4010: Contains markings for a USAF FSD F-16A, S/N 75-0747, and a Belgian AF F-16A without a number.

Monogram early Kit 5401: Contains markings for the colorful General Dynamics YF-16, S/N 72-1576.

Monogram later Kit 5421: Contains markings for USAF Block 1 F-16A, S/N 78-002, assigned to the 388th TFW, 34th TFS, Hill AFB with a red fin stripe.

Otaki Kit 18: Contains inaccurate markings for an F-16A, S/N 79-0296, of the 4th TFS, 388th TFW, but the instructions are for the same markings as shown for the Tamiya kit below.

Revell Kit 4305: Contains markings for Block 1 USAF F-16A, S/N 78-0001.

Tamiya Kit MA-122: Contains markings for the colorful General Dynamics prototype YF-16, S/N 72-1567, and a gray USAF F-16 with the tail number represented as AF/01-568.

1/32nd Scale Kits

Minicraft/Hasegawa Kit 100: Contains markings for the first three FSD F-16As: 1. General Dynamics colorful red, white, and blue rollout scheme with national flags, S/N 75-0745: 2. overall gray per FS 36270, S/N 75-0746; and 3. three-tone gray per FS 36270, FS 36076, and FS 36440, S/N 75-0747. Curiously, there are decals for the pilot, including helmet markings and a shoulder patch for the 388th TFW, and a pair of 388th TFW intake markings, with the later having no placement instructions. In 1982, Minicraft will re-release this kit with markings for the Thunderbirds and a production aircraft from the 388th TFW at Hill AFB.

Revell Kit 4701: Contains markings for the first production F-16A, S/N 78-0001, as it appeared when it came off of the assembly line. However the data block provided shows a different serial number than the one on the tail, being 78-0242 instead of the 78-0001. This kit is to be re-released in 1982 with Israeli markings.

Microscale Sheet 72-227:

Country	Model	Block	S/N	Remarks
Belgium	F-16A	1	FA-3	USAF S/N 78-0118
Netherlands	F-16A	1	J-212	
Norway	F-16A	1	273	Paint scheme shown is for a later model gray radome in lieu of the standard Block 1 black radome. Instructions are provided for scratch-building the required drag chute housing.
Denmark	F-16A	5	ET-177	USAF S/N 78-0177.
Denmark	F-16B	1	ET-205	USAF S/N 78-0205.

This sheet also contains wing walk stripes, stenciling, and poor representations of instrument panels and consoles. The background for the panels and consoles are white instead of the proper gray. No F-16 has a white interior!

Microscale Sheet 72-278: Contains markings for four USAF F-16s as follows:

Model	Block	S/N	Remarks
F-16A	1	78-0012	388th TFW, 4th TFS, Wing CO's aircraft with blue, red, yellow fin stripes.
F-16A	5	78-0056	56th TFW, Wing CO's aircraft, segmented colored fin stripe. Prior to stylized tail number.
F-16A	5	79-0290	388th TFW, Fighting Falcon naming ceremony aircraft.
F-16B	1	78-0096	388th TFW, 34th TFS, Red fin stripe, "charcoal lizard" paint scheme.

Again, this sheet contains some stenciling, and the phony looking instrument panels. Many of the smaller markings are missing - most importantly the pilot's, and crew chief's names on the naming aircraft and two CO's aircraft. These names were quite prominate on all aircraft, and should be included.

Microscale Sheet 72-285: Contains markings for five TAC aircraft including a Block 1 F-16A, S/N 78-0003 (one S/N away from one provided in the I taleri kit), from the 388th TFW, 16th TFTS, Hill AFB. The same comments as above apply to the instrument panels and stencils.

Microscale Sheet 48-93: Contains markings for the prototype YF-16, S/N 72-1567, and the first FSD F-16A, S/N 78-0745, in the rollout scheme. Instrument panels and some stenciling are provided, but the same comments apply as on the 1/72nd scale sheets covered above.

REFERENCE LISTING

Note: Listed here are references on the Fighting Falcon that should prove helpful in providing Information and photographs of a different nature and format than what is presented In this publication. With each listing Is a brief description of what that reference covers. Not all references on the F-16 can be listed here, and the fact that a given reference Is not included here is not Intended to reflect unfavorably on that reference.

1. Holder, William G., and Siuru, William D. Jr., General Dynamics F-16, Aero Publishers, Fallbrook, California, 1976.

As of press time, this was the only book published that was dedicated entirely to the F-16. A revised second edition is due out in the second half of 1982.

2. Lloyd, Alwyn T„ "More Fight for the Fighting Falcon," Air International, Vol. 21, No. 4, Page 161.

The F-16 program and aircraft are updated in this extensive article by Detail & Scale's own Historian, Al Lloyd, who also contributed to this publication.

3. Bulban, Erwin J„ "F-16 Modifications Authorized."Aviation Week & Space Technology, Sept. 1, 1980.

This excellent article discusses modifications and improvements to the F-16 including new electronics and the new horizontal tail.

4. Horseman, Martin, "The F-16 ET&E Deployment," Air Classic Quarterly Review, Vol. 6, No. 4, Winter 1979, Page 37.

This article covers the European Test and Evaluation, (ET&E) of the F-16 during February - May 1979. This was the first major testing of the F-16, and the last evaluation prior to the large-scale introduction of the F-16 into the USAF.

5. "Profile: General Dynamics F-16," Wings, July, 1978, Page 45.

Good general article covering the historical origins, aerodynamics, engine, weapon systems, and maintenance of the F-16.

6. Ropelewski, Robert R.,"F-16 Displays Combat Capabilities," Aviation Week & Space Technology, May 28, 1979.

The editor of "Aviation Week" gets a demonstration flight in the F-16, and describes the experience in this article. Good examples of the F-16's combat capability.

7. Newcomb, Harold, and Kokojan, Herman, "The Combat Co-op," Airman, February 1978.

Good article explaining the unique international business venture by several NATO nations co-producing the F-16.

8. "The Texan Swing Fighter,"Air International. Vol. 13, No. 5, Page 217.

Thorough article covering the development of the F-16 up through its widespread introduction into operational service.

9. "Special Report: F-16 Multinational Fighter Program," Aviation Week & Space Technology, May 2, 1977.

Almost this entire issue of "Aviation Week" is dedicated to every aspect of the development of the F-16. Excellent issue.

10. Lambert, Mark, "Europe's F-16 Plans Unfold." Flight International, October 23, 1976.

An informative article covering the responsibilities of the various European co-producers of the F-16.

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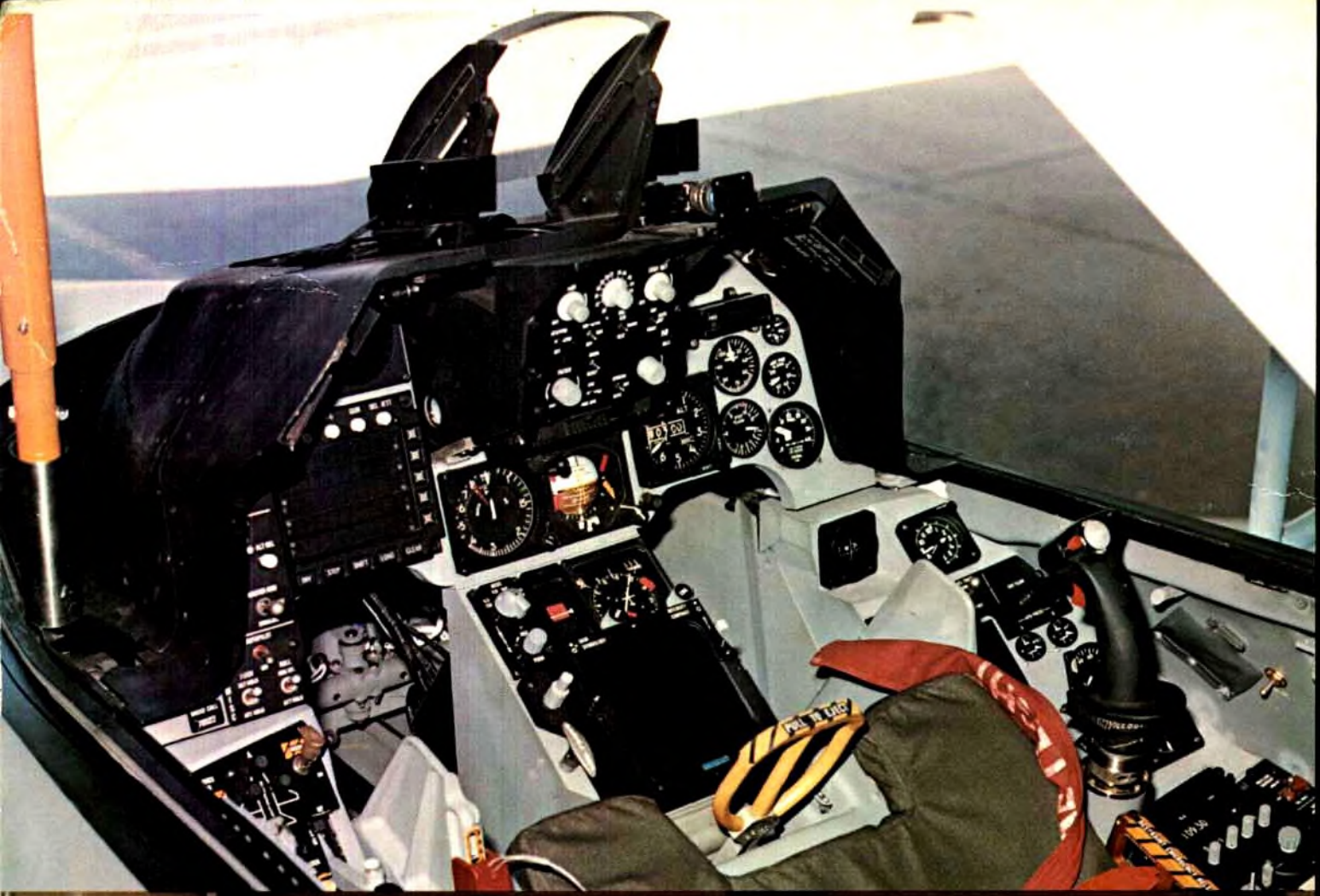

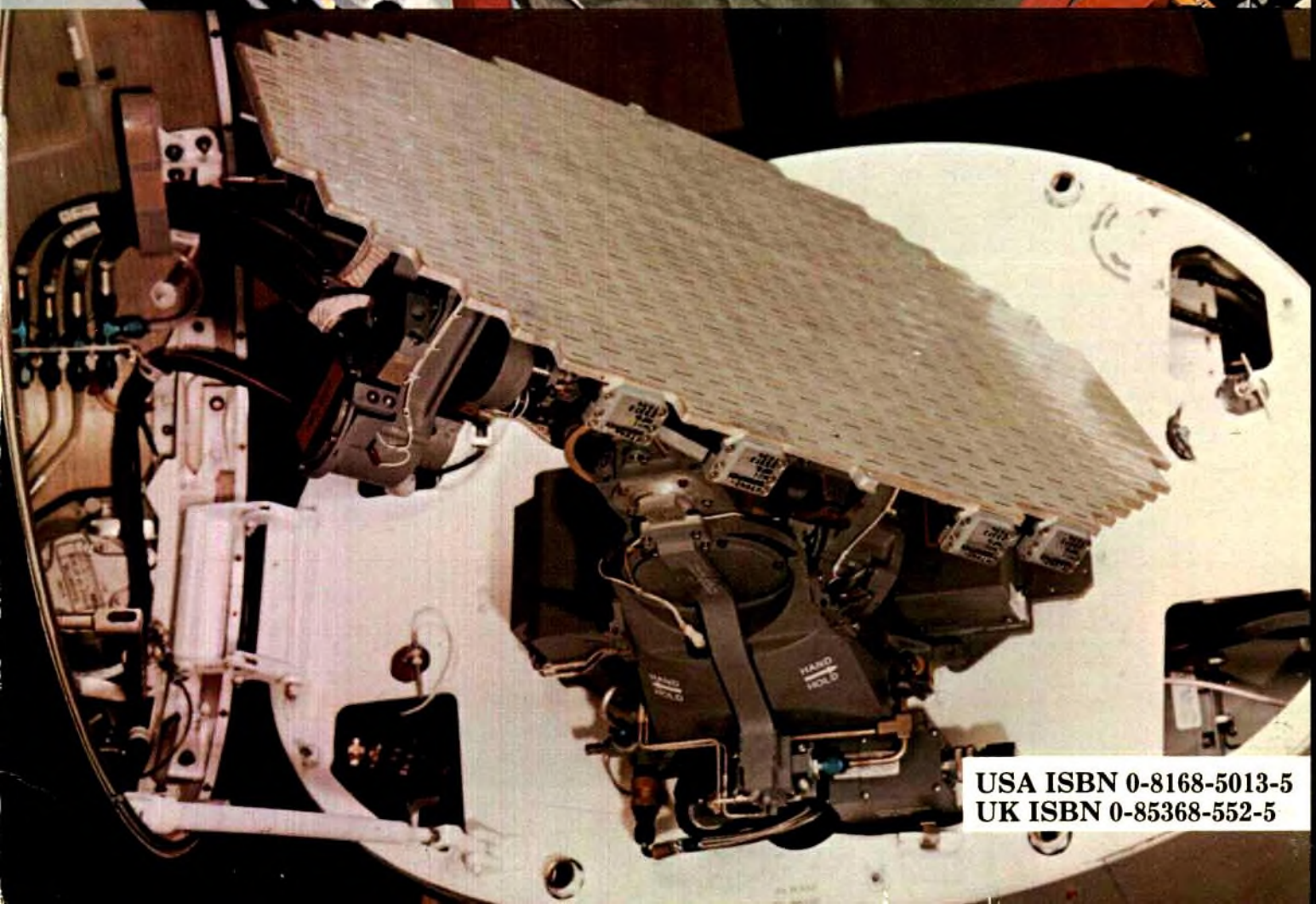

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